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City of Salford

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# ANNUAL REPORT

OF THE

## Medical Officer of Health

FOR THE YEAR

### 1945

BY

J. L. BURN, M.D., D.Hy., D.P.H.,

MEDICAL OFFICER OF HEALTH





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# Members of the Health Committee,

1945-46.

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Councillor C. R. V. HAYNES, J.P., *Deputy-Chairman*.

Alderman J. LEMMON (*Mayor*), J.P.

„ G. W. SANDS, J.P.  
(*Deputy-Mayor*).

„ BRENTNALL, J.P.

„ CUTTIFORD, J.P.

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„ WEBB, L.

Councillor BELL.

„ FEARNEHOUGH.

„ GOULDEN.

„ KITCHIN

„ MALLINSON.

„ OPENSHAW, J.P.

„ SHLOSBERG.

„ WHITEHEAD.

## STAFF.

### Public Health Department—1945.

Medical Officer of Health .....	}	J. L. BURN, M.D., D.Hy., D.P.H.
Administrative Tuberculosis Officer .....		
Clinical Tuberculosis Officer .....		R. N. WALKER, M.D., D.P.H.
Maternity and Child Welfare	{	M. SPROUL, M.B., Ch.B., D.P.H.
Medical Officers .....		K. M. BOYES, M.B., Ch.B., D.P.H.
		M. MAXWELL-REEKIE, M.B., Ch.B.
City Pathologist.....		G. J. CRAWFORD, B.Sc., M.D., M.R.C.P. (Lond.), D.P.H.
Assistant Pathologist.....		L. STENT, M.D., M.R.C.S., L.R.C.P.
Venereal Diseases Medical Officer...		A. J. GILL, M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H.
Asst. Venereal Diseases Medical	{	F. M. BLADES, M.B., Ch.B.
Officers. ....		A. W. RITCHIE, M.B., Ch.B., D.P.H. (part-time).

#### HOPE HOSPITAL.

##### WHOLE-TIME STAFF.

Medical Superintendent .....	GEORGE BROWN, M.B., Ch.B., F.R.C.S. (Edin.).
Deputy Medical Superintendent and Physician.....	WILLIAM MACKAY, M.D., F.R.F.P.S. (Glas.).
Obstetric Officer.....	C. G. ROWORTH, M.R.C.S., L.R.C.P., M.B., B.S. (Lond.), M.R.C.O.G. (on Active Service). Acting Obstetric Officer—L. RESNICK, M.B., Ch.B., M.R.C.O.C.
Resident Surgical Officer.....	C. GRIMSHAW, M.B., Ch.B., F.R.C.S. (Edin.).
Assistant Medical Officers .....	SEVEN.

##### VISITING (PART-TIME) STAFF.

Visiting Specialist in Children's Diseases .....	CATHERINE CHISHOLM, C.B.E., B.A., M.D. (Manch.).
Orthopædic Surgeon .....	S. M. MILNER, M.A., M.B., Ch.B. (Cantab. and Manch.), M.R.C.S., L.R.C.P. (Lond.), F.R.C.S. (Eng.).
Surgeon for Diseases of the Ear, Nose and Throat.....	W. B. MCKELVIE, M.D., F.R.C.S. (Edin.).
Anæsthetist, Radiologist and Lecturer.....	J. GHOSH, F.R.C.S.I., D.P.H.
Matron.....	Miss H. M. R. JENKINS, S.R.N., S.C.M. to May. Miss K. MARTIN, S.R.N., S.C.M. from June.
Steward .....	C. A. A. HANKINS.

## LADYWELL SANATORIUM.

Medical Superintendent .....	W. EDGE, M.R.C.S., L.R.C.P., D.P.H.
Assistant Resident Medical Officer	Miss M. KAMIEL, M.D.U. (Leipzig).
Visiting Aural Surgeon.....	W. B. McKELVIE, M.D., F.R.C.S. (Edin.).
Matron .....	Miss M. A. HITCHEN, S.R.N., S.C.M.

---

## NAB TOP SANATORIUM.

Medical Superintendent .....	H. M. FLEMING, B.A., M.D., Ch.B., B.A.O., D.P.H.
Consultant Thoracic Surgeon.....	A. GRAHAM BRYCE, M.D., F.R.C.S., D.P.H.
Matron.....	Miss M. D. CHISHOLM, S.R.N.

---

Public Analyst .....	G. H. WALKER, Ph.D., B.Sc., F.R.I.C.
Chief Administrative Assistant ...	E. WOOD.
Chief Sanitary Inspector .....	P. PILGRIM.

## INTRODUCTION.

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TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Mr. Chairman, Ladies and Gentlemen,

In submitting the Annual Report for 1945, I should like to point out some features of interest.

No noteworthy outbreak of disease occurred.

The infant mortality rate (61) although the lowest on record remains far too high. Much effort is required to bring this rate down. We must face the fact that many influences—social, economic, bad housing and poor standards of mothercraft—will need remedies on a bold and large scale.

### MATERNITY AND CHILD WELFARE.

An investigation was carried out into the differential rates of *infant mortality* in the various groups of the population. It was found that in the group living in the Trinity Ward the infant mortality is more than twice as high as that in the Claremont Ward, whereas the number of deaths from 2 to 12 months of age are in the proportion of one-half to one-quarter respectively.

The attendance of a *Psychologist* at the Maternity and Child Welfare Clinics was an interesting innovation and we believe that the services of a Psychologist should be available at all our Clinics. The medico-social needs of the mothers attending the Clinics were met in a fuller way than in the past as a qualified *Almoner* was able to give some of her time.

Special attention was given throughout the year to certain *problem families* where the standard of care for the children was of a very poor order. Assisted by social service workers, some definite improvement occurred in one-third of the families. In another third, some improvement of a temporary nature occurred, whilst in the remaining one-third no improvement could be observed. All of these families had hitherto been regarded as hopeless by health and social workers, so it is pleasing to record that in nearly one-third of the cases improvement was effected.

In our midwifery service an interesting feature was the establishment of *combined post-natal and infant welfare clinic*. Such a clinic tends to overcome a difficulty which has always faced us—that of giving the busy mother, confined six to eight weeks previously, a thorough overhaul. In the past, mothers have found it difficult to attend owing to the demands of the new baby on their time. The new venture, by offering the advantage of examination of the mother and of the infant, has been appreciated. The *Midwives' Clinics* are now well-established and are attended by midwives who carry out many of the routine examinations and thus allows the Medical Officers to concentrate on those mothers in whom some abnormality has been discovered. The age range of mothers taking advantage of our service was wide—at one end, a girl of 14 and at the other a woman of 48. The rise in the number of *illegitimate births* has occasioned much



concern. The proportion is now 1 in every 11 confinements, whereas in pre-war days the ratio was 1 in 27. The many problems of the care of the unmarried mother and her child took up much time in the Maternity and Child Welfare Department.

The new Birthday Card, designed and produced locally and giving health advice in a topical and attractive form, was appreciated in many homes.

As the number of births exceeded 3,000, the midwifery services operated under high pressure.

#### DIPHTHERIA IMMUNISATION.

Over half of our children under five years of age are now protected against diphtheria. Much effort has been made since the close of the year to improve these figures still further and whilst we cannot feel complacent on this matter we can record with satisfaction that the number of pre-school children immunised has risen tenfold in the last four years.

A special administrative section was set up in the Health Department to deal with the proper organisation and carrying out of the diphtheria immunisation scheme and the value of having such a section, wholly devoted to immunisation, has been proved beyond doubt.

#### HEALTH EDUCATION.

An increased number of talks and demonstrations was given to mothers and children. Shop window demonstrations were organised and there was a welcome increase in the amount of time devoted to health teaching.

#### VENEREAL DISEASES.

A feature of the year's work was the increasing emphasis placed on the social aspect. Male contacts and male defaulters were followed up, using the services of a Male Visitor. One small example of the human way in which problems of getting patients under treatment was shown in the effort taken to provide sweets for those unfortunate children who must attend for injections. Considerable correspondence with the Ministry of Food was necessary to obtain the various permits, but success was achieved. As in the Diphtheria Immunisation Clinics, where sweets are provided, we were determined to provide something for the children who have to endure the necessary treatment.

#### HOPE HOSPITAL.

The report of Mr. George Brown, the Medical Superintendent, should be read in its entirety. It gives some idea of the immense amount of time and care devoted to the improvement of hospital services by you and your officers.

#### ENVIRONMENTAL HYGIENE.

##### HOUSING.

Over 37,000 sanitary defects were inspected during the year. This huge total reflects the invaluable work of the Sanitary Inspector which goes on and does much to make housing conditions more tolerable. Exceptional difficulties have been faced: the shortage of materials and labour has rendered the work



of remedying the sanitary defects a very heavy task. It is obvious that in Salford we must "make do and mend" with our houses. It will be long before any of the 10,000 houses, which form the first instalment of our slum clearance problem, are dealt with.

#### SMOKE ABATEMENT.

Arrangements have been made to secure the operation of "prior approval," by this Department, of the design of new fuel burning appliances before installation; thus, we are trying to prevent as well as cure smoke nuisance.

Co-operation with the Ministry of Fuel and Power was a feature of our work in this sphere.

I welcome the formation of the North West Regional Smoke Abatement Committee. In Salford we make plenty of smoke and get other people's and it is sensible that all neighbouring authorities should combine for consideration and action.

#### DISINFESTATION.

A Disinfestation Service was inaugurated during the year. Many hundreds of houses were disinfested by the use of D.D.T.

#### INVESTIGATIONS.

As you are aware, the laboratories of the City Analyst and of the City Pathologist and Bacteriologist are housed in the premises of the Public Health Department. The foresight of those who years ago, established this arrangement is worthy of recognition. The close proximity of the services under one roof enables effective co-operation especially in the investigation of outbreaks of disease and other enquiries of importance to public health.

Special attention was paid this year to investigation into the purity of ice cream and into the cleanliness of beer glasses. Regarding the former, a survey was made of all premises used in the making of ice cream and as a result, some improvements were effected. I quote these as examples to show the many measures which are undertaken to safeguard public health.

The Health Department staff also co-operated in a number of socio-economic enquiries, *e.g.*, the income and expenditure in certain families in which a sufferer from tuberculosis lived and also in an enquiry held under the auspices of the Institute of Statistics of the University of Oxford, into the expenditure of working-class households.

A comparison of certain facts and figures of importance to public health is given in a brief report showing changes which have taken place in the incidence of certain diseases in the years 1895 and 1945.

I wish to record appreciation to all members of the staff for their loyal work during the year. During 1945, as in the previous war years, we were helped through difficult times by the employment of temporary staff—to them thanks are due for their help.

I have the honour to be,

Yours faithfully,

PUBLIC HEALTH DEPARTMENT,  
143, REGENT ROAD, SALFORD, 5.  
31st July, 1946.

J. L. BURN,  
Medical Officer of Health.

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## STATISTICAL SUMMARY, 1945.

**Area.**—The City of Salford has a total area of 5,202 acres.

**Population.**—(Registrar-General's Estimate at Mid-year, 1945)..... 157,300  
 „ (Census, 1931)..... 223,438

**Density.**—The Mean Density of the City is equal to 30·2 persons per acre.

Live Births	{	Legitimate 1,395 Males,	1,354 Females .....	2,749
	{	Illegitimate 146 „	127 „ .....	273
			Total	3,022

Annual Rate of Births per 1,000 of the Population..... 19·2

Still Births { Males 35 } Total..... 62  
                   { Females 27 }

Annual Rate of Still Births per 1,000 Total Births..... 20·1

Deaths { Males 1,289 } ..... 2,443  
           { Females 1,154 }

Annual Rate of Mortality per 1,000 of the Population..... 15·5

Percentage of total deaths occurring in Public Institutions.....48·0 per cent.

**Deaths from Puerperal Causes :—**

	Deaths.	Rate per 1,000 Total Births.
Puerperal Sepsis .....	3	0·97
Other Puerperal Causes .....	3	0·97
	Total 6	1·94

**Death-rate of Infants under one year of age per 1,000 live births :—**

Legitimate, 61. Illegitimate, 55. Total.....	61
Deaths from Measles (all ages) .....	4
„ „ Whooping Cough (all ages) .....	5
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TABLE M. 4.

SHOWING THE BIRTHS IN THE CITY OF SALFORD, DEATHS OF LEGITIMATE AND ILLEGITIMATE INFANTS UNDER ONE YEAR OLD AND THE PROPORTION OF DEATHS UNDER ONE YEAR OF AGE PER 1,000 BIRTHS DURING THE YEARS 1938 TO 1945.

Years.	Births.			Percentage of Illegitimate Births to Total Births.	Deaths under One Year.			Porportion of Deaths under One Year per 1,000 Births.		
	Total.	Legit.	Illegit.		Total.	Legit.	Illegit.	Total.	Legit.	Illegit.
1938.....	3145	3037	108	3.4	233	213	20	74	70	185
1939.....	2925	2808	117	4.0	202	194	8	69	69	68
1940.....	2884	2742	142	4.9	219	209	10	76	75	70
1941.....	2518	2377	141	5.5	240	215	25	96	90	177
1942.....	2823	2632	191	6.8	217	203	14	77	77	73
1943.....	3085	2863	222	7.2	214	203	11	69	71	50
1944.....	3251	3025	226	7.0	202	182	20	62	63	88
1945.....	3022	2749	273	9.0	183	168	15	61	61	55

TABLE M. 5.

SHOWING THE BIRTH-RATES, ALSO RATES OF MORTALITY FROM ALL CAUSES, FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES, AND FROM TUBERCULOSIS OF RESPIRATORY SYSTEM, CANCER, NERVOUS DISEASES, HEART DISEASES, BRONCHITIS, PNEUMONIA AND THE INFANT MORTALITY RATE DURING THE YEARS 1938 TO 1945.

Years.	Population.	Rates per 1,000 Population from									Deaths under One Year to 1,000 Births.	Marriage Rate.
		Births.	Deaths, All Causes.	Seven Principal Zymotic Diseases.	Tuberculosis of Respiratory System.	Cancer.	Nervous Diseases.	Heart Diseases.	Bronchitis.	Pneumonia.		
1938 ...	199,400	15.8	13.1	0.3	0.9	1.7	0.8	2.8	0.6	1.0	74	...
1939 ...	196,600	14.9	14.3	0.2	0.9	1.8	0.7	3.8	0.7	1.0	69	...
1940 ...	173,200†	16.6	19.1	0.3	1.1	2.0	1.1	5.3	1.7	1.2	76	...
1941 ...	159,720†	15.8	16.8	0.4	1.1	1.7	1.1	4.3	1.1	1.2	96	...
1942 ...	153,300†	18.4	14.5	0.4	0.9	2.2	1.0	3.4	0.9	0.8	77	...
Average 5 years		16.3	15.6	0.3	1.0	1.9	0.9	3.9	1.0	1.0	78	...
1943 ...	153,000†	20.2	15.7	0.3	1.0	2.2	0.9	2.7	1.9	0.9	69	...
1944 ...	155,810†	20.9	14.6	0.4	0.9	2.1	0.9	2.4	1.9	0.6	62	...
1945 ...	157,300†	19.2	15.5	0.2	0.9	2.0	0.8	2.2	2.9	0.8	61	...

† Civil population.

## SANITARY CIRCUMSTANCES AND ADMINISTRATION.

The following are the outstanding features of the year's work :—

### **Housing : General Position at December, 1945.**

There was a computed pre-war houses-to-population shortage of 500, and during the war 2,000 houses were demolished as a result of enemy action.

The number of applicants for Corporation houses on the Council's register at December, 1945, was 7,129, of which I have certified 1,079 as being cases demanding urgent priority.

Of a present total of 50,494 houses in the City there are 9,655 in ten slum areas which have been ear-marked for clearance at the earliest possible moment.

Apart from a few temporary prefabricated houses erected during the latter half of this year there has been no new building.

Salford's housing position therefore, reviewed at the end of 1945, is grim ; relief by way of materials and labour for large scale building operations—to fill in the shortage and allow clearance and redevelopment of the large slum areas—is anxiously awaited.

During the hiatus very many insanitary dwellings must perforce continue in use ; general demolition procedure under Parts 2 and 3 of the Housing Act is frozen.

It has become increasingly obvious, however, that many houses, which are dilapidated beyond repair and improvement and in a dangerous condition, will have to be made the subject of action under Section 11 of the Housing Act ; the families thus displaced will be rehoused in the houses of prefabricated types, delivery and erection of which has recently commenced.

### **Housing Act, 1936, Section 9.**

Reconditioning work under Section 9 of the Act again proceeds on a modified peace-time standard. Of the Notices served prior to 1945, 11 houses have been reconditioned in accordance with the specification sent with the Notices, and 86 houses are in process of reconditioning.

Twenty-seven houses were inspected with a view to taking action under this Section.

Repairs under Section 9 have been curtailed during the year owing to several causes, the predominant factor being the acute shortage of materials and the lack of skilled labour. Repairs to existing property are subordinated to the building of new houses which is the Government's No. 1 Priority, and licences



and permits for materials for repairs are most difficult to obtain. Where these are granted the quota allotted is too small to enable contractors to carry out the work satisfactorily.

Another factor which is to be stressed, is that owing to the increased cost of repairs at the present time, regard has to be had to reasonable cost in relation to the value of the houses, and in view of this situation, the type and class of property requiring attention under this Section is limited, and only a portion of repairs can be executed to comply with the provisions of the Act.

It is expected in the near future that when the position eases with regard to materials and labour, the reconditioning of defective property will be resumed to full capacity.

#### **Smoke Abatement.**

The routine observation of all industrial chimneys has not yet been resumed, the practice having been to devote attention to those chimneys which are known to be frequent offenders against the black smoke code.

The table of statistics presented tends to show considerable improvement during the year. In general the average amount of black smoke per observation may have been reduced but what has been recorded was produced by fewer chimneys. Cases have occurred where black smoke has been emitted for as much as 25 minutes in the half-hour. Such cases demand frequent and intense investigation on the boiler plant and of the stoking methods to ascertain the cause. The Regional Fuel Engineer of the Ministry of Fuel and Power has again co-operated where the quality of fuel has been unusually poor.

The coal position has not improved and the greatest difficulty is experienced by those firms with mechanical stokers who are compelled to use fuel unsuitable to this method of firing. Fortunately, the problem of labour is gradually becoming easier, as younger, more energetic, and more alert boiler firemen become available. By their more intelligent efforts and willingness to learn, better results are obtained from the low grade coal now in use, although the labour position is still such that employers are not yet in a position to deal drastically with cases of gross carelessness and neglect.

The majority of works executives desire their plants to be operated as smokelessly as possible, in the interests of economy. In several cases difficulties in the supply of appliances designed to give better combustion have been overcome.

It has not been felt expedient to institute court proceedings in any case during the year, but continued failure on the part of certain firms to realise their responsibilities will inevitably lead to the reintroduction of this procedure.

Five nuisances from smoke other than black smoke have been abated by having the chimneys raised to facilitate effective dispersal of the smoke emitted. In only one case was it necessary to serve notice to enforce the demand.

There has been one submission of a proposal to erect a new chimney. This in connection with a new cupulet at a steel foundry. Agreement was reached with the firm to increase the proposed height by several feet and to construct the chimney in such a manner that its height could be readily increased if necessary. The work has not yet been commenced.

A proposal to construct a new power-house with twin chimneys in the Higher Broughton district is being carefully handled although specific plans have not yet been submitted. The area is a residential one and the project may not mature owing to certain restrictions imposed by the Regional Planning Authority.

An arrangement has now been made with the Building and Development Committee for plans concerning proposed boiler plant or other fuel burning installations to be submitted to the Health Committee. Hitherto it has been the practice to do this only where reference was made to the heights of chimneys. Similar procedure is adopted at Birmingham, Leeds, Sheffield and West Ham. Opportunity is thus afforded to introduce the question of smoke abatement with owners and architects. Much can be done at this early stage to ensure the installation of suitable plant. The grave defect still exists that knowledge of alterations, modifications and additions to existing plant is not revealed to the Smoke Abatement Authority.

Statistical reports have been submitted to the Health Committee monthly and firms reported. The tabulated figures shown below are the totals for the year.

	1945.	1944.
Total number of observations made.....	399	354
Black smoke emissions up to one minute.....	68	48
Black smoke emissions from one to two minutes ....	29	21
Black smoke emissions from two to three minutes...	15	8
Black smoke emissions over three minutes .....	28	39
Total minutes black smoke observed.....	343.0	372.5
Average minutes black smoke per observation.....	.86	1.05
Abatement Notices authorised .....	8	4
Number of intimations served.....	46	38
Number of cautionary letters sent.....	5	16
Number of cautions to firemen .....	27	33
Number of advisory visits made.....	36	22

Of atmospheric pollution arising from domestic smoke very little advancement can be reported.

Manufacture of the new grates designed to burn smokeless fuels as well as bituminous coal has not yet reached proportions warranting their compulsory installation in all new houses. It is hoped that a condition of granting the Government's housing subsidy will be the installation of this type of appliance.



We have, during the year, seen one type installed in the new temporary houses. The difficulty of making available regular supplies of smokeless fuels remains to be solved however, and it is too early yet to pronounce judgement on the practical efficiency and capabilities of the new fire grates. They are expected to give a working efficiency of not less than 40 per cent. In future models this is likely to be increased to 50 per cent.

Measurements of pollution by the standard soot gauges are reported on another page by the City Analyst. These represent total soot deposited, and at present there is no certain method of finding what proportion of the total is attributed to domestic smoke, and what proportion to all other sources including factories, railways, shipping, road vehicles, etc. Careful estimates have put the domestic contribution as low as 50 per cent. and as high as 75 per cent. In any case domestic smoke is generally of a more tarry nature owing to conditions of combustion.

Further, it is not possible to distinguish between pollution from sources within the City area and that carried in from a distance, either from the extensive neighbouring industrial area or even from further afield.

The total insoluble deposit (including soot, tar, grit and all solid matter from chimneys) measured at three widely separated points in or very near the City amounts respectively to 11, 11 and 15 tons per square mile every month, indicating an average of about 12 tons per square mile. Over the whole area of Salford this would amount to nearly  $1\frac{1}{2}$  cwts. per hour.

The measurements also show that about one-fortieth of the total insoluble deposit consists of crude tar, so that on the same basis, about 4 lbs. of crude tar are distributed over the City area every hour.

The presence of these impurities in the atmosphere is a menace to the general health of the community and every endeavour must be made to eliminate them even to the extent of seeking further legislative powers. The smokeless combustion of fuel and communal district heating are two means by which this might be achieved.

Cases of atmospheric pollution from the emission of noxious effluvia occur from time to time and one such case was dealt with during 1945 and the nuisance abated.

#### **Shops Acts.**

With the imminent review by a Government Commission of the whole of the Shops Acts, it is probable that various anomalies under the existing legislation will be abolished.

If the early closing of shops is to remain the only limitation of working hours for employees of 18 years of age and over, it is to be hoped that a limit will be placed on the time that a customer may be served after "closing hours," particularly in hairdressing establishments.



There is a possibility of the principle of half-day closing being made more elastic so as to allow occupiers of shops to choose different half-days and enable the shopping public to have better shopping facilities ; it will be necessary to fully protect the employee's weekly half-holiday.

In my opinion the principle of compensatory time off for Sunday employment could well be extended to all employees.

The existing laws for the health and comfort of shop workers should be extended and strengthened, and a standard of cleanliness should be required in every shop.

The provision of accommodation for clothing and facilities for the drying of clothes which is essential for factory workers, is equally desirable for employees in the distributive trade.

With the continued co-operation of employers I am confident that conditions can and will be improved in the shops in this City.

#### **Pharmacy and Poisons.**

Under the Pharmacy and Poisons Act, 1933, 127 shopkeepers were registered by this Authority during the year as sellers of Part II poisons, as against 116 last year.

The number of registrations given for the year was comprised of 114 renewals and 13 new registrations. 147 visits were made to registered premises during the year.

#### **Labelling of Foodstuffs.**

The most important and far-reaching legislation affecting Food Adulteration which came into full force during the year was the Labelling of Food (No. 2) Order, dated the 28th December, 1944.

The section of the Order respecting advertisements came into force from the 1st day of January, and the full Order was in operation from 1st November, 1945.

The Labelling of Food Order requires a statement as to composition on the labels of all pre-packed foods. Further, if a claim is made either on the label or in an advertisement that the food (with certain specified exceptions) contains vitamins or minerals, then the label or advertisement must in addition declare the minimum quantity of each such substance per ounce present.

#### **Canal Boats.**

Transportation of goods by waterway in the City remains at a low ebb. The majority of canal boats inspected ply between New Bailey Street and the Docks. Several are at present used for storage purposes only.

No defects were found and the sanitary and hygienic condition of the cabins was entirely satisfactory.

No women or children were found on the boats and invariably the crews consisted of master and a mate who have their permanent residence ashore.

### **Insect, Vermin, and Disinfestation Measures.**

The year 1945 has been noteworthy inasmuch as we have seen the insect problem tackled with new insecticide materials and new disinfestation technique.

At the beginning of 1945, long established disinfestation methods were still being operated in general practice, *e.g.*, in bug-ridden premises liquid contact insecticide was forced by power gun into cracks and crevices of walls, ceilings and furniture ; the insecticide which had been used for this purpose during the previous year, with varying degrees of success, was Lethane 384 special in 10 per cent. concentration. Control of house flies at the breeding ground had been attempted by supervision of stable manure receptacles, etc., and for cockroach infestation stomach poison in the form of sodium fluoride and flour had been used.

In January, 1945, however, experimental work began in Salford, in the employment of D.D.T. as an insecticide, followed shortly afterwards by experiments with Gammexane. With these chemical insecticides, carefully carried out and recorded experiments were embarked upon, the following being selected for treatment :—a large lodging house, a stable, houses and flats, canteen kitchens, a hospital, and a tip. Much data was also collected concerning the treatment of verminous persons with the new materials.

The fact of improved efficiency of treatment soon became established, holding out a prospect of successful endeavour towards total eradication of dangerous insect vermin throughout the whole of the City.

Establishment of a municipal disinfestation service was authorised by the Council in September, 1945, and disinfestation work has since proceeded steadily, even in winter months when such work usually ceases ; in fact, probably the most remarkable feature of the new technique is that treatment of bug-infested premises has been carried out during the months of November and December with confident anticipation founded on research that an applied D.D.T. deposit will remain toxic to insects during the 1946 breeding season.

For operation of the service, supplies of materials were assured, spraying and dusting equipment obtained, and two men employed, whole-time, for the work.

From the end of September to the end of the year the following disinfection treatments had been effected with satisfactory result, viz. :—

Hospitals, wards, kitchens, laundries .....	2
Day Nurseries .....	10
Houses .....	201
Flats.....	154
Canteens .....	13
Public Libraries—reading rooms .....	5
Factories.....	2
Fish and Chip Restaurant .....	1
Hostels.....	1
Tips .....	1
	—
<b>TOTAL .....</b>	<b>390</b>
	—

There may, of course, be some changes in the near future with regard to insecticide formulations and methods of application and also some slight modification or increase in charges made for service, but the following are details of Salford practice during 1945 :—

Formulations :—

- For bedbugs      —(a) D.D.T. Kerosene Solution.
- (b) Gammexane Kerosene Solution.
- For Flies        —(a) D.D.T. Water Suspension on lime-washed surfaces.
- (b) Solution of D.D.T. with resin in a solvent for application to glazed or painted surfaces.
- (c) Kerosene Solution of D.D.T. or Gammexane.
- For lice and fleas—5 per cent. dust : mixture of D.D.T. and China Clay.
- For cockroaches —(a) 10 per cent. Dust : mixture of D.D.T. and China Clay.
- (b) Gammexane 666 Powder.
- For crickets     —(a) D.D.T. Neocid Dust.
- (b) Gammexane 666 Powder.

With reference to methods of application the following technique was evolved as a result of experiment. Bearing in mind the residual toxicity of D.D.T. or Gammexane it has proved unnecessary to follow the insect to breeding place or nest ; the insecticide is deposited upon surfaces with which the insect makes foot contact. Hence in action against bugs application of spray to wall surfaces and bedframes has proved efficient. Against the house fly spray is applied to surfaces with special attention to pendant fittings and window panes. For eradication of lice and fleas dust is introduced to clothing and bedding with additional treatment in the case of the flea—floor spraying a measure against maggots. For eliminating cockroaches insecticide in dust form has been applied to flooring and other surfaces and also blown into wall and skirting crevices and into crevices beneath floors.



A hand-pumped pneumatic cylinder with hose and fine nozzle is used for spraying whilst for powder distribution a hand operated insufflator with a canister to hold  $1\frac{1}{2}$  lbs. of powder has given satisfaction.

Accounts have been forwarded to owners or occupiers based on cost of labour, material and haulage of equipment plus a small establishment charge. Allowing for slight variations the following may be regarded as average specimens of accounts rendered :—

Bugs.....	2 bedroom house, £1 0s. 11d.
„ .....	3 „ „ £1 4s. 2d.
„ .....	8-roomed house, £1 11s. 6d.
Cockroaches.....	Living rooms, 4s. to 15s. varying with degree of infestation and number of applications.
Cockroach .....	Canteen kitchen, dining rooms and storeroom, £2 6s. 3d.

#### Heavy Infestation.

Flies .....	Canteen, 12s. 4d.
Fleas and Lice ....	Library, public reading room, £1 17s. 4d.

Treatment has invariably given satisfactory results ; costs incurred have been recovered without difficulty.

By dint of propaganda, investigation of complaints and routine inspections it is envisaged that, with the advent of spring weather and throughout the summer next year, the service will be operating at full pressure. Ten to twenty disinfestations per day will be the probable output of work, which will surely make a marked impression upon the City's infestation problems.

The provisions of Section 84 of the Public Health Act, 1936, are invoked by service of Notices but much more work is accomplished by virtue of voluntary orders from owners and occupiers of premises the number of which is rapidly growing as the existence of the service is becoming known.

#### Sublet Houses.

The number of sublet houses in the City has increased slightly during the past year, there being 259 at December, 1944, and 270 at December, 1945.

The number of lettings, however, has increased considerably as at the close of the year there was hardly a vacant room in the town.

It is true to say that at the end of the year there was in sight a similar heyday for the occupiers as in the post-1918 period, when many of the present relics commenced their career.

This increase is undoubtedly due to the return of men and women from H.M. Forces and other National Service, many of them having married and now requiring houses of their own.

Consequently, the measure of overcrowding is increasing and there is every prospect that this increase will continue.

In this connection the granting of priorities for housing plays an important role, and whilst there are many urgent claims for priority, none are so urgent as the case of an overcrowded family living in a sublet house and endeavouring to rear a family under these conditions.

Again with the increase in this type of letting, the number of families using water closet accommodation in common is increased and under this heading instead of the 856 families previously returned, the number now will probably approximate to 1,000.

Corresponding increases have taken place in the number of people using water and bath accommodation in common.

The outstanding necessity to improve these conditions is the erection of new houses which besides housing many of the more urgent cases will release accommodation which could then be used to provide more suitable tenancies for those that are left.

The increase of the number of cookers and geysers available to the public will also help to minimise these conditions, but the flow of these goods at the moment is very slow. It is only by the rigid application of the Sublet House Byelaws that these conditions will be improved and ultimately remedied.

Repairs are being carried out as expeditiously as the limited materials and manpower available will permit.

#### **Seamen's Lodging Houses.**

Whilst the general standard of cleanliness in these houses has been maintained, there has been a noticeable diminution in the number of lodgers, both English and foreign, and it would appear that for some time to come very few of these houses will be full.

There is also a noticeable tendency on the part of Merchant Seamen to seek accommodation at the large Institutional Houses where meals and recreation can be obtained.

This is a welcome trend of events as a higher standard of life and accommodation are to be found in the large Institutional Houses.

#### **Common Lodging Houses.**

The Common Lodging Houses in the City still number four, in addition to Salford House.



The general standard in these premises has been maintained and only at the close of the year has there been any change in ownership, Nos. 1 and 1A, Park Place having changed hands.

Here again is a type of life one would like to see removed and something of a much higher standard substituted, but when dealing with the residents of these places one finds that they have little or no desire to improve their own standard of life and it is extremely difficult to devise a type of accommodation suitable for this class of person.

In view of the results of disinfestation which the Department has done at Salford House, referred to elsewhere in this report, it has been decided to press owners and occupiers to co-operate in an endeavour to rid Common Lodging Houses in the City of vermin. There is every prospect that the necessary co-operation will be forthcoming and that the near future may see vermin free lodging houses, a state of affairs long desired and equally long overdue.

#### **Municipal Lodging House—Salford House.**

Salford House, or the " Model Lodging House " as it was then entitled, was erected in 1893, and is believed to have been the first Municipal Lodging House in this country. Its purpose at the date of erection, as at the present time, was to provide accommodation at a reasonable rent for the working man who either had no home of his own or whose work took him away from home. Contrary to current belief, there is a great number of such individuals, many of whom are willing to pay for, and who appreciate, the better conditions obtaining in a Municipal Lodging House of this type than are to be obtained in the majority of Common Lodging Houses, even though a lower rent is charged at the latter.

It is not pretended that by modern standards the accommodation provided at Salford House is by any means ideal but it is maintained that the accommodation is reasonably good and there is every reason to believe that it meets the needs of many men who would otherwise be homeless.

The building comprises four storeys with accommodation for 285 male lodgers. Generally the House is filled almost to maximum capacity by residents whose ages range from 18 years to 87 years—it has become the permanent home of a number of men, some of whom have been in residence for more than twenty years. Each lodger is provided with a separate sleeping cubicle and the House contains kitchens, dining room, day room, baths, laundry, domestic offices and a shop, at which lodgers may purchase the majority of their foodstuffs.

Accommodation provided in the House has been of particular value for housing men who were directed to war work in the district after the heavy raids.

An innovation for the benefit of the lodgers, which has been in operation during the last two years, has been the making of arrangements through the Ministry of Information for film shows and lectures upon subjects of general

interest. These have been much appreciated and represent a valuable piece of social work.

As may be well understood, the constant coming and going of a considerable number of men who do not live under the best of conditions, and who are constantly changing their places of residence, has given rise from time to time to infestation in varying degrees. During 1945, an extensive experiment as to the prevention of infestation was carried out under the direction of the Medical Officer of Health, in which the insecticide D.D.T. was used. The experiment was highly successful and apart from temporary local infestation, the Lodging House is entirely free from vermin.

It is desired to stress once again that although Salford House cannot be conducted without some financial loss to the rates, its existence is of great value to a section of the population which would otherwise be forced to accept very inferior conditions.

### **Food Poisoning**

Five outbreaks of food poisoning were reported during the year in which 341 affected persons were traced. It is possible that the number of persons affected was much greater than this figure. Symptoms, in general, were not severe and were of short duration, a few hours, although there was one exceptional case which was fatal.

All five outbreaks occurred in connection with school meals. A detailed investigation was carried out in each case. Analyses showing each item of food in the meals eaten by affected persons indicated that meat, meat gravy, potatoes and ice-cream (eaten at a Victory Party) were the probable vehicles of infection.

Extensive bacteriological examinations of fæces, urine, vomit, samples of the suspected food, etc., failed to reveal any pathogenic organisms. Chemical examinations of the suspected food also failed to give any significant results. On the available evidence any explanation of the happenings would be in the nature of conjecture, but it is thought that storage of foodstuffs under conditions suitable for the rapid multiplication of bacteria might have been responsible.

### **School Meals Kitchens.**

Resulting from the outbreaks of food poisoning an intensive investigation was carried out at the School Meals Kitchens and Dining Centres.

Medical histories of the staff were taken and examinations of urine and fæces carried out in doubtful cases. Attention was directed towards adequate washing facilities for the staff, cleanliness of premises and equipment, cleansing processes for utensils, food storage, pest infestation, lighting, ventilation, overcrowding and congestion, disposal of waste, sanitary conveniences, and general suitability of the premises and distribution vehicles. Kitchen utensils were swabbed and bacteriological examinations carried out to test the efficiency of cleansing processes. Kitchens were sprayed with D.D.T. against flies, etc.



Recommendations for improvement were sent to the Director of Education who is endeavouring to put them into effect. There is no doubt that with the co-operation of the kitchen staffs and the awakening of a deeper consciousness with regard to hygienic control, the possibility of food poisoning outbreaks in connection with school meals can be considerably reduced.

### Ice Cream.

In June an outbreak of food poisoning occurred at a Salford School and ice cream was implicated as the probable cause. As a result of this happening samples were collected from the main local suppliers and an investigation made as to the methods and conditions of manufacture at the premises of ice cream manufacturers within the City.

Examination of the samples revealed gross bacterial contamination in most cases. This was attributed to the fact that heat treatment was not applied to the ice cream mix before freezing. To test this theory an experiment was carried out in the laboratory (see page 56, City Pathologist's report) which showed the need for effective heat treatment. Otherwise the conditions of manufacture were satisfactory. The practice of boiling the ice cream mix seems to have been discontinued nowadays on the grounds of fuel economy and convenience.

There is an urgent need for both a composition and a bacterial standard for ice cream but existing conditions make the formulation of such standards very difficult. The compulsory heat treatment of the raw materials of manufacture would, however, impose no serious difficulty, and could be put into operation immediately.

The compulsory heat treatment suggested is the same as that recommended in the Dried Egg (Control of Use) Order, 1945, which already controls the manufacture of ice cream where dried egg is used as an ingredient.

A further legal provision should be that once frozen the ice cream should be kept in a frozen condition until it is delivered to the consumer. In the outbreak of food poisoning referred to above it was strongly suspected that ice cream unsold on one day had melted and been refrozen the next day.

The unfrozen "ice cream mix" at favourable temperatures is a rich medium for bacterial growth and the need for temperature control throughout manufacture is vitally necessary.

### Beer Glasses.

Attention has also been given during the year to the methods of washing beer glasses in public houses.

There seems to be a definite reluctance on the part of publicans to the using of hot water. Explanations given are that a hot glass will "turn the beer flat,"



or that the use of very hot water will "break the glasses." The answers are obviously to have sufficient glasses to obviate hasty washing, not to put hot glasses on a cold slab, and to allow sufficient time beforehand for them to cool gradually.

A technique was devised in the laboratory for testing the efficacy of the cleansing processes (see page 56, City Pathologist's report) and the glasses tested were used for demonstrating to the publicans the need for efficient cleansing. Some improvements were effected in certain public houses, e.g., the provision of hot water geysers instead of depending on a domestic back-boiler for the provision of the hot water supply, but there remains much to be done in this sphere of public health work.

### **Safe Milk.**

Excellent as were the provisions made in Defence Regulation 55G last year, it is regrettable that as yet no areas have been specified for the compulsory heat-treatment of milk. It is realised that in many areas adequate facilities do not exist for efficient heat-treatment of the milk supply and there are many producer-retailers to be considered. Here in Salford, however, there are adequate facilities for compulsory heat-treatment and there are no producer-retailers in the City at the present time. In these circumstances it is felt that Salford would be an ideal starting point for compulsory heat-treatment, and it is hoped that in the near future the Minister of Food will declare the City to be a "specified area" in accordance with Defence Regulation 55G. Already 90 per cent. to 95 per cent. of the City's Milk supply is heat-treated.

A dissentient note must be recorded against the exception of Accredited and Tuberculin Tested Milk from the provisions governing heat-treatment. Many people are paying extra for these classes of milk and are under the impression that they are obtaining safe milk, which is definitely not the case. No raw milk supply can be considered safe until it has been efficiently heat-treated.

It must be openly admitted, however, that all heat-treatment is not yet efficient. Seven per cent. of samples taken this year show gross under-heating as detected by the phosphatase test. This is an improvement upon last year's figure (11 per cent.). These percentages are not a true indication of the position in general, as it is the policy to sample bad supplies more frequently than good ones. With the introduction of the newer types of plant and better trained operatives, there is no doubt that the possibility of error will be greatly minimised. Two new plants are in course of erection in the City.

### **Staff.**

The Department has laboured under a serious staff shortage. Pre-war the establishment consisted of 18 Sanitary Inspectors, whereas at the present time there are only 13.

The following tables are included to give some idea of the nature and extent of the work carried out during the year :—

<i>Nature of Inspections.</i>	<i>Totals.</i>
Sanitary Defects (roofs, gutters, drains, etc.), under Public Health Act and Housing Act	30,162
Housing Survey (Sec. 5) .....	210
Inspections <i>re</i> Housing Applications.....	1,340
Inspections <i>re</i> Requisitioning of Houses .....	868
Sublet Houses .....	337
Seamen's Lodging Houses .....	68
Common Lodging Houses .....	21
Van Dwellings .....	—
Factories .....	73
Shops Act Inspections .....	35
Schools .....	131
Cinemas .....	21
Public Conveniences .....	625
Stables .....	15
Tips .....	2
Dairies .....	230
Milk Shops .....	491
Food Manufacturing Premises .....	42
Butchers Shops .....	416
Fish and Chip Shops .....	52
Restaurants.....	10
School Meals Kitchens .....	83
Factory Canteens .....	17
Bakehouses .....	53
Ice Cream Shops .....	66
Public Houses .....	8
Ships <i>re</i> Importation of Dogs and Cats .....	14
Slaughterhouses and Knackers Yards .....	17
Piggeries .....	57
Dysentery Cases.....	62
Smallpox Contacts.....	37
Food Poisoning .....	152
Unsound Food .....	257
Miscellaneous Visits .....	1,559
	<hr/>
	37,531
	<hr/>

*List of Samples Taken.*

Milk for T.B. Test .....	175
„ Phosphatase and Methylene Blue Tests	205
„ Quality Tests.....	1,628
Fertiliser and Feeding Stuffs Act Samples.....	8
Pharmacy and Poisons Act Samples.....	5
Water Supply Samples.....	46
Swimming Bath Water Samples .....	84
	<hr/> 2,151 <hr/>

*Complaints, Notices, Letters, etc.*

Complaints Received.....	10,782
Statutory Notices Issued.....	3,951
„ „ Abated .....	2,822
Intimation Notices Issued.....	3,064
„ „ Abated .....	1,670
Letters Written .....	4,635
Priority Housing Certificates Granted.....	1,022

**Prosecutions.**

Offence.	No. of Cases.	Decision of Magistrate.
<b>FOOD AND DRUGS ACT.</b>		
For selling baking powder deficient of 83·7% of available carbon dioxide.	1	Fined £2 2s. 0d. and £2 2s. 0d. costs.
For selling milk containing extraneous water.	2	1 fined £20 0s. 0d. and £12 12s. 0d. costs. 1 fined £10 0s. 0d. and £3 3s. 0d. costs.
For failing to keep the room surface (butcher's shop) in a proper state of repair, and the room and utensils clean.	1	Fined £10 0s. 0d.
<b>PUBLIC HEALTH ACT, 1936.</b>		
For failing to comply with Notices under Section 93 of the Public Health Act, 1936, requiring them to carry out necessary repairs to dwellinghouses.	4	1 Order to abate within 31 days. 1 Order to abate within 14 days. 2 Orders to abate within 21 days.



## **TUBERCULOSIS DISPENSARY.**

### **Annual Report for 1945.**

During 1945 there was still an increase over the previous years, in the number of new cases referred to the chest clinics from General Medical Practitioners and other sources. The number of patients referred during 1945 being 1,180.

As in former years an appreciable proportion of cases referred to the clinics showed abnormality other than tuberculous. By giving as much help as possible in diagnosis of this type of case one hopes to encourage practitioners to refer cases freely so that tubercle may be discovered in as early a stage as possible.

#### **(a) Sputum Examinations.**

Seven hundred and eighty-eight (788) samples of sputum were examined in 1945.

All sputum examinations desired by Medical Practitioners are made free of charge at the Municipal Pathological Laboratory and special sterile metal containers are provided for the collection of the specimens.

#### **(b) Contacts.**

In 1945, the Department made a special effort to induce more contacts, especially children, to attend for examination, and were rewarded by a definite increase in these figures over the preceding years. A single contact examination is not considered sufficient; three monthly examination is carried out on all contacts who can be induced to attend. One thousand, one hundred and twenty-eight (1,128) contact examinations were made during 1945. Three of these were found to be suffering from pulmonary tuberculosis, and one from non-pulmonary tuberculosis.

It will be seen that contact examination entails a large volume of work in proportion to the number of cases of tubercle found, but as tubercle is sometimes found at an early stage the work seems worth while.

#### **(c) X-ray Examinations.**

During the year we were fortunate in having a new Rotating Anode Tube fitted to the four-valve set. The quality of the films has therefore returned to its previous high level and the work of the Department made much more convenient.

As in previous years a considerable number of pregnancy X-rays were taken for the Maternity and Child Welfare Department.

Five thousand and eighty-three X-ray examinations were made during 1945.

(d) **Treatment by Artificial Pneumothorax.**

This method of treatment has been carried out in all cases where it was considered that benefit could possibly accrue. There have been several very successful examples of bilateral artificial pneumothorax.

One unilateral artificial pneumothorax case unfortunately developed a staphylococcal emphyema. She completely recovered on penicillin at Ladywell Hospital.

**Analysis of Cases given Artificial Pneumothorax Treatment.**

During 1945, twenty-nine (29) new cases commenced treatment by artificial pneumothorax, eight (8) at Ladywell Hospital, and twenty-one (21) at Nab Top Sanatorium. Forty-eight (48) patients continued their refills at the Dispensary, twelve (12) of whom are working with completely quiescent disease. The number of artificial pneumothorax refills carried out at the Dispensary and Nab Top Sanatorium during 1945, was as follows :—

Tuberculosis Dispensary ...	794
Nab Top Sanatorium .....	342
	<hr/>
	1,136
	<hr/>

(e) **Thoracic Surgery.**

During the year Mr. Graham Bryce continued to give his valuable aid as consulting Thoracic Surgeon, making monthly visits to Nab Top Sanatorium and Ladywell Hospital. In addition to his help in the surgery of tuberculosis, he has been good enough to expedite the treatment of non-tuberculous chest cases.

(f) **Non-pulmonary Tuberculosis.**

The total number of primary and informal notifications of non-pulmonary or surgical tuberculosis received during 1945 was fifty-six (56), twenty-three adults and thirty-three children of school age. These are made up of cases suffering from glands, bones, joints, abdomen, meninges and other forms. Many of these patients are not seen at the Dispensary for the first time as they are often sent direct by the General Medical Practitioners to the local hospitals for diagnosis and treatment. Others, of course, are sent in the first instance to the Dispensary by General Practitioners, and in the case of children some are referred by the School Medical Officers.

Cases requiring surgical treatment are usually sent by the Dispensary Medical Officers to the Municipal Hospital, in some instances, having already been seen by Salford Royal Hospital. Where sanatorium treatment is likely to be of benefit the patients are sent by the Tuberculosis Officers, at the request of the Hospital Medical Officers, to Nab Top Sanatorium. When considered suitable, patients are referred for treatment at the Artificial Sunlight Clinic.

(g) **Treatment of Tuberculous Skin Diseases.**

Special arrangements have been made with the Manchester and Salford Hospital for Skin Diseases for the treatment of lupus and other tuberculous skin lesions. A number of these cases are approved for Artificial Sunlight treatment and there is no doubt that this method has a very beneficial effect on the lesions, recovery being much more rapid than in cases treated by local application only. It is, however, necessary in order to obtain the maximum benefit that the patients should attend frequently for Artificial Sunlight treatment.

The number of visits paid by patients to the Skin Hospital for treatment during 1945 was ninety-four (94), and the total number of tuberculous skin patients treated was fifteen (15).

All suitable cases are treated at our own Artificial Sunlight Clinic. In this way many patients, who had previously been treated at the Manchester and Salford Hospital for Skin Diseases, now attend our own Sunlight Clinic where the treatment is carried out at a much cheaper rate than hitherto. During 1945 fifty (50) patients have received treatment at the Sunlight Clinic with a total number of attendances of one thousand, five hundred and seventy-one (1,571).



TABLE 1.

SUMMARY OF WORK DONE AT THE TUBERCULOSIS DISPENSARY IN 1945.

Diagnosis.	Pulmonary.				Non-Pulmonary.				Total.			
	Adults.		Children.		Adults.		Children.		Adults.		Children.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A. New cases examined during the year—												
(a) Definitely tuberculous.....	116	104	7	3	7	11	9	11	123	115	16	14
(b) Doubtfully tuberculous.....	...	...	...	...	...	...	...	...	38	13	5	1
(c) Non-tuberculous..	...	...	...	...	...	...	...	...	371	421	53	47
B. Contacts examined during the year—												
(a) Definitely tuberculous.....	...	2	1	...	...	1	...	...	...	3	1	...
(b) Doubtfully tuberculous.....	...	...	...	...	...	...	...	...	...	...	...	...
(c) Non-tuberculous..	...	...	...	...	...	...	...	...	74	174	100	109
C. Cases written off Dispensary Register as—												
(a) Recovered .....	15	18	...	...	7	9	5	2	22	27	5	2
(b) Diagnosis not confirmed or non-tuberculous.....	...	...	...	...	...	...	...	...	445	598	159	156
D. Number of persons on Dispensary Register on December 31st—												
(a) Diagnosis completed .....	414	344	26	25	28	42	56	39	442	386	82	64
(b) Diagnosis not completed.....	...	...	...	...	...	...	...	...	38	13	5	1
1. No. of persons on Dispensary Register on January 1st...	1005				8. No. of visits by Nurses or Health Visitors to homes for Dispensary purposes...				3280			
2. No. of patients transferred from other areas and "lost sight of" cases returned...	53				9. No. of—							
3. No. of patients transferred to other areas and cases "lost sight of" .....	151				(a) Specimens of sputum &c., examined.....				788			
4. Died during the year (Dispensary cases) .....	145				(b) X-ray examinations made in connection with Dispensary work				5083			
5. No. of attendances at Dispensary (including contacts).....	5834				10. No. of "TB plus" cases on Dispensary Register on December 31st.....				391			
6. No. of consultations with medical practitioners—					11. No. of insured persons under Domiciliary treatment on December 31st.....				688			
(a) Other.....	954				12. No. of "Recovered cases" restored to Dispensary Register .....				1			
7. No. of visits by Tuberculosis Officers to homes.....	48											

TABLE 2.

SHOWING PERIOD ELAPSING BETWEEN NOTIFICATION AND DEATH  
IN FATAL CASES OF PULMONARY TUBERCULOSIS.

	Number.	Per-centage
Not notified before death .....	14	8·48
Notified within three months of death.....	32	19·39
„ from three months to one year before death .	29	17·58
„ from one year to two years before death.....	24	14·55
Over two years.....	66	40·00

Total number of deaths, 165.

Ratio of non-notified cases to total fatal cases, 14—165.

TABLE 3.

NEW CASES AND MORTALITY DURING 1945.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0 .....	...	...	...	...	...	...	...	...
1 .....	5	3	6	3	2	1	4	4
5 .....	2	...	4	10	1	1	1	1
10 .....	1	1	3	7	...	...	1	3
15 .....	17	28	2	2	1	7	...	...
20 .....	19	30	1	3	5	16	...	...
25 .....	20	24	1	3	18	11	2	2
35 .....	23	20	2	2	18	13	...	2
45 .....	25	7	1	2	24	9	...	1
55 .....	17	7	2	1	20	6	1	1
65 and upwards.....	9	...	...	1	11	1	...	...
TOTALS .....	138	120	22	34	100	65	9	14

TABLE 4.

## OCCUPATIONS OF THE 258 CASES OF PULMONARY TUBERCULOSIS

## NOTIFIED.

## MALES.

1. Joiners, House Decorators and Building Trades.....	2	11. Coal Workers .....	2
2. Dockers.....	2	12. Shop Assistants .....	2
3. Labourers and Navvies ...	9	13. Armed Forces .....	25
4. Clerks.....	4	14. Motor Drivers .....	3
5. Railway Workers .....	5	15. Warehousemen .....	2
6. Makers of Wearing Apparel	3	16. Scholars .....	3
7. Timber Trade .....	2	17. Under 5 years .....	5
8. Mechanics and Engineering Workers.....	25	18. Miscellaneous Occupations	30
9. Cinema Workers.....	2	19. No Occupation.....	8
10. Merchant Seamen .....	4		
		TOTAL .....	138

## FEMALES.

1. Clerks and Typists .....	9	11. Packers.....	3
2. Makers of Wearing Apparel	13	12. Auxiliary Police .....	2
3. Rubber Workers .....	5	13. Ex-Armed Forces .....	3
4. Cotton Workers.....	2	14. Box Makers.....	2
5. Nurses.....	5	15. Under 5 years .....	2
6. Housewives .....	29	16. Miscellaneous .....	20
7. Scholars .....	1	17. No Occupation.....	4
8. Munition Workers.....	16		
9. Shop Assistants .....	3	TOTAL .....	120
10. Domestics.....	1		

During the year 1945, 56 new notifications of non-pulmonary tuberculosis have been received.

The new cases of non-pulmonary tuberculosis notified are classified in the following table :—

	Glands.	Bones.	Abdomen.	Skin.	Meninges.	Other forms.	Totals.
Under 10 years .....	8	4	—	1	9	1	23
10 to 20 years.....	4	4	2	1	2	2	15
20 to 30 „ .....	1	1	2	—	—	2	6
30 to 40 „ .....	—	2	—	—	—	1	3
Over 40 „ .....	2	4	—	—	1	2	9
TOTALS.....	15	15	4	2	12	8	56



## NAB TOP SANATORIUM.

### Annual Report for 1945.

As in the past Nab Top Sanatorium has been used for the treatment of early and intermediate cases of pulmonary tuberculosis. Owing to the fact, however, that Ladywell Hospital, due to shortage of staff, cannot accept their full complement of patients, we have admitted some advanced cases of pulmonary tuberculosis, who, although not likely to improve, were at least taken away from their homes, and the possibility of infecting other members of the household thus lessened. Some few cases of non-pulmonary tuberculosis have, however, been admitted on special orthopædic recommendation. At present there only eight (8) beds in the institution for children, and as these are all in one Ward and the sexes have to be mixed only children up to the age of nine years can be admitted. There are no facilities, therefore, for admitting doubtfully tuberculosis children, or delicate children who would benefit by removal from a household in which there is serious open infection.

Our Occupational Therapy classes are still continuing, though this work is still in its infancy. We are greatly handicapped by lack of suitable accommodation, and classes for men and women are at present held in the same room, though at different times. Owing to this handicap the work turned out is limited in quality and quantity, and we hope when fully equipped to produce a much more extensive range of goods.

In the near future an X-ray plant will be installed and we hope then to do all our work in this line here and thus obviate the expensive and inconvenient method adopted for the past two years of sending patients for screening and X-ray photographs to the Chest Clinic at Regent Road, Salford. In this connexion I would wish to pay tribute to Miss Kirk, who took all the necessary photographs, for her good consideration and co-operation, without which this branch of the work could not possibly have been carried out.

The following tables give figures as to the work carried out at Nab Top Sanatorium during the year.

TABLE A—(Nab Top Sanatorium).

SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF  
 "PATIENT-DAYS" DURING THE YEAR 1945.

	Total Adults.		Children under 15.			Totals.		
	Males	Females	Males	Females	Both	Males	Females	Both
Number of Patients admitted prior to 1945 who remained in Sanatorium for some part of 1945 .....	34	25	2	6	8	36	31	67
Number of "Patient days" in 1945 for patients admitted prior to 1945 who remained in Sanatorium for some part of 1945.....	4715	2723	730	746	1476	5445	3469	8914
Total admissions, 1945.....	84	79	5	6	11	89	85	174
Total discharges and deaths, 1945 .....	78	81	1	7	8	79	88	167
Number of "Patient-days" for persons admitted during 1945 .....	10688	9509	515	1212	1727	11203	10721	21924
Total number of "Patient-days" for 1945.....	15403	12232	1245	1958	3203	16648	14190	30838
Average number of patients in Sanatorium each day during 1945.....	42.2	33.5	3.4	5.4	8.8	45.6	38.9	84.5

NOTE.—The term "Patient-days" represents the product of the number of patients and the number of days spent by those patients in the Sanatorium.

The following tables give figures as to the work carried out at Nab Top Sanatorium during the year.

Duration of Residential Treatment in Institution.																
Condition at Time of Discharge.	Under 3 Months, but exceeding 28 days.						3 to 6 Months.			6 to 12 Months.			Over 12 Months.			
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
	Quiescent.....	...	...	...	...	2	...	3	12	...	...	...	...	...	...	
Not Quiescent.....	9	13	1	14	16	1	40	18	3	2	3	...	3	3	...	
Died .....	...	2	...	1	1	...	1	2	...	1	1	...	1	1	...	
TOTALS ....	9	15	1	15	19	1	44	32	3	3	4	...	4	4	...	
Pulmonary Tuberculosis .....																
Quiescent.....	...	...	...	...	...	...	...	2	...	1	1	...	1	1	...	
Not Quiescent.....	2	...	...	1	1	...	1	1	2	...	...	...	...	...	...	
Died .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
TOTALS ....	2	...	...	1	1	...	1	3	2	1	1	...	1	1	...	
Non-Pulmonary Tuberculosis .....																
Quiescent.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Not Quiescent.....	2	...	...	1	1	...	1	1	2	...	...	...	...	...	...	
Died .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
TOTALS ....	2	...	...	1	1	...	1	3	2	1	1	...	1	1	...	
Non-Pulmonary Tuberculosis .....																
Observation for Purposes of Diagnosis .....																
Under 4 weeks.																
Over 4 weeks.																
Tuberculosis.....																
Non-Tuberculous.....																
Doubtful.....																



## LADYWELL HOSPITAL (TUBERCULOSIS SECTION).

### Annual Report for 1945.

The tuberculosis blocks at Ladywell Hospital are still used for the most part for advanced cases of pulmonary tuberculosis. Owing to the shortage of Nursing and Domestic staffs, now approximately only fifty (50) beds out of seventy-two (72) have been available. Even this reduced number has thrown a very considerable strain on the Nursing staffs concerned.

Several cases who would not consent to Nab Top Sanatorium have been admitted for a short time to Ladywell Hospital for induction of artificial pneumothorax, and a number of moderate or early cases of pulmonary tuberculosis accompanying pregnancy or illness of a non-tuberculous nature have been treated in the Ladywell Wards.

The Ladywell X-ray plant which had become obsolete has been removed and the room so cleared has been made into a very useful side ward.

### LADYWELL HOSPITAL.

TABLE SHOWING THE NUMBER OF ADMISSIONS, ETC., AND THE NUMBER OF "PATIENT-DAYS" FOR 1945.  
TUBERCULOSIS CASES.

	Males.	Females.	Totals.
Total Number of Admissions during 1945	73	64	137
Number of Persons Admitted prior to 1945 who remained in Hospital for some part of 1945.....	26	20	46
Total Number of Discharges and Deaths during 1945.....	77	67	144
Patients in Hospital on the 31st December, 1945.....	21	21	42
Number of "Patient-days" for Persons Admitted during 1945.....	4672	4496	9168
Number of "Patient-days" (in 1945) for Persons admitted prior to 1945 who remained in Hospital for some part of 1945.....	3095	4369	7464
Total Number of "Patient-days" for 1945	7767	8865	16632
Average Number of Patients in Hospital each day during 1945.....	21.3	24.3	45.6

MASS MINIATURE RADIOGRAPHY—SALFORD, 1945.

The following are the statistical figures in connection with the Mass Miniature Radiography examinations carried out in the City during the year 1945 :—

	Salford Corporation Departments.			The Grammar School, Salford.			G.P.O., Salford.			Greengate & Irwell Rubber Co. Ltd.			Total.		
	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total
1. Number employed.....	Selected Groups.			Selected Groups.			Balance of employ- ees who could not attend during sur- vey, in Manchester, of Ministry Depart- ments.			443 1,134 1,577			... ... ...		
2. Total radiographed.....	195	367	562	93	...	93	38	5	43	270	722	992	596	1,094	1,690
Percentage of (1) .....	...	...	...	...	...	...	...	...	...	60.9%	63.7%	62.9%	...	...	...
3. Total " passed on " miniature examination.....	177	353	530	92	...	92	35	5	40	243	662	905	547	1,020	1,567
Percentage of (2) .....	90.76%	96.18%	94.3%	98.92%	...	98.92%	92.1%	100%	93.0%	90.0%	91.7%	91.23%	90.1%	93.23%	92.72%
4. Failed to attend for repeat miniature.....	...	1	1	...	...	...	...	...	...	1	...	1	1	1	2
5. Total recalled for full size films following abnormal miniature Percentage of (2) .....	18	13	31	1	...	1	3	...	3	26	60	86	48	73	121
	9.23%	3.54%	5.51%	1.07%	...	1.07%	7.9%	...	6.97%	9.6%	8.3%	8.7%	8.05%	6.67%	7.16%
6. Failed to attend for full size film.....	...	1	1	...	...	...	1	...	1	2	2	4	3	3	6
7. Total " passed on " full size films .....	8	5	13	1	...	1	...	...	...	12	22	34	21	27	48
Percentage of (2) .....	4.1%	1.36%	2.31%	1.07%	...	1.07%	...	...	...	4.4%	3.05%	3.4%	3.52%	2.46%	2.84%
8. Total " passed " on X-ray exam- ination (3) and (7).....	185	358	543	93	...	93	35	5	40	255	684	939	568	1,047	1,615
Percentage of (2) .....	94.87%	97.54%	96.61%	100%	...	100%	92.1%	100%	93.0%	94.4%	94.7%	94.66%	95.3%	95.7%	95.56%
9. Total recalled for medical inter- view .....	10	7	17	...	...	...	2	...	2	12	36	48	24	43	67
Percentage of (2) .....	5.12%	1.9%	3.02%	...	...	...	5.26%	...	4.65%	4.4%	5%	4.8%	4.02%	3.93%	3.96%





Ministry of Health Classification Number.	TITLE	Classification on 35 m.m film. (No further action)			Recalls for full size film.						Totals.
		Males	Females	Total	Not followed by recall for medical interview (No further action)			Followed by recall for medical interview			
					Males	Females	Total	Males	Females	Total	
18	Missing repeat 35 m.m. film.....	1	1	2	...	...	...	...	...	...	2
19	Missing large film .....	...	...	...	3	3	6	...	...	...	6
20	Tuberculosis—active primary lesions, includ- ing epi-tuberculosis— (a) With symptoms.....	...	...	...	...	...	...	...	...	...	...
	(b) Without symptoms .....	...	...	...	...	...	...	...	...	...	...
21	Tuberculosis—inactive primary lesions ( <i>e.g.</i> , Ghon's focus and/or calcified gland) .....	1	6	7	2	2	4	...	...	...	11
22	Tuberculosis—active, post-primary unilateral (a) With symptoms.....	...	...	...	...	...	...	...	1	1	1
	(b) Without symptoms .....	...	...	...	...	...	...	...	2	2	2
23	Tuberculosis—active, post-primary bilateral (a) With symptoms.....	...	...	...	...	...	...	1	4	5	5
	(b) Without symptoms .....	...	...	...	...	...	...	...	2	2	2
24	Tuberculosis—inactive, post-primary— (a) Previously known cases.....	...	...	...	...	...	...	4	1	5	5
	(b) Previously unknown cases ...	...	...	...	10	3	13	5	8	13	26
25	Tuberculosis—pleural effusion .....	...	...	...	...	...	...	...	...	...	...
26	Tuberculosis—spontaneous pneumothorax and hydropneumothorax .....	...	...	...	...	...	...	...	...	...	...
30	Abscess of lung .....	...	...	...	...	...	...	...	...	...	...
	Passed as " normal " .....	545	1,014	1,559	6	16	22	1	12	13	1,594
	Failed to attend for clinical interview.....	...	...	...	...	...	...	...	1	1	1
	TOTALS .....	548	1,021	1,569	24	30	54	24	43	67	1,690

An analysis of the 28 cases of pulmonary tuberculosis recalled for medical interview shows that :—

- (a) Ten were regarded as active. All of these were resident in the Salford area, and none had previously been notified. Nine were advised to attend their private Medical Practitioners with a view to reference to the Senior Clinical Tuberculosis Officer in regard to the provision of treatment. The tenth case failed to supply the name of her Medical Practitioner and no further action could be taken.

Of the 9 mentioned, 8 attended for examination by the Tuberculosis Officer, 7 being recommended for institutional treatment. Four accepted this form of treatment and were admitted to sanatorium, 3 declined and were, therefore, placed under Dispensary supervision. The eighth case was not considered to require institutional care and Dispensary supervision was advised.

Sputum was positive for tubercle bacilli in 3 instances—2 in the group admitted to sanatorium, and 1 in the group declining admission.

- (b) Eighteen were regarded as inactive cases. Eleven were Salford residents, 2 being previously known cases. Six of the 18 were regarded as inactive after the initial clinical examination by the Radiography Unit Medical Officer and the remaining 12 following further observation at the Tuberculosis Clinic either in Salford or in the area of their residence.

In the cases of other various diseases and abnormalities where, after initial examination by the Radiography Unit Medical Officer, treatment or further investigation was considered to be indicated, the individual was advised to consult his private Medical Practitioner to whom was sent, with the patient's consent, a full report on the clinical and radiological findings.

## TUBERCULOSIS ALMONER'S DEPARTMENT.

### Annual Report for 1945.

The Tuberculosis Almoner's Department was primarily established to deal with patients who came within the scope of the Government's Scheme for the provision of financial assistance for persons suffering from tuberculosis. Whilst the administration of this scheme continues to occupy much of the Almoner's time, a review of the year's work shows that a considerable amount of service has been rendered to patients and families not covered by the scheme. It is found that financial assistance is by no means the only help required and, as the patient's needs are individual, so are the Almoner's efforts to deal with them.

Every opportunity is taken to emphasise the importance of regular examination of contacts. The Almoner tries to see the patient as a member of a family, and to keep in contact with both the patient and his relatives throughout treatment. She points out to the patient that the Department has a dual responsibility, namely (*a*) the treatment of persons suffering from tuberculosis, and (*b*) the safeguarding of the health of anyone who may have contact with him, either in his family, or in the community as a whole. Patients find it easy to understand the first of these duties but many of them fail to realise that a Public Health Service can be used to preserve the good health of those fortunate enough to possess it.

During the year it was arranged with the Public Assistance Department that all tuberculous patients in receipt of relief should be paid at the City Treasurer's Office at the Salford Town Hall, instead of at the Public Assistance pay stations. This system should help to prevent the spread of infection, and it has undoubtedly made the transition from the Government Scheme to Public Assistance less distressing to patients.

Housing difficulties continue to be very serious for our patients but the decision of the Council to give priority in cases where isolation cannot be maintained has been very helpful. Several families have been rehoused, and their living conditions are now much improved. In some cases it has been necessary to assist these families to obtain beds and bedding. Two camp beds previously used by the staff on Civil Defence Duties were obtained, and it has been possible to loan these in cases where temporary sleeping accommodation was essential.

Birth Control advice has been sought during the year by a number of married women patients. Arrangements have been made in each case for the patient to attend the Manchester, Salford and District Mothers' Clinic for Birth Control.



In several instances the children of women requiring sanatorium treatment have been admitted to Children's Homes, and periods of convalescent treatment have been arranged for child contacts in other instances. In long term cases the cost has been borne either by the Public Assistance Committee or by the parents, but in those cases requiring a month or less at a Convalescent Home the cost has been borne by the After Care Fund.

A gift of clothing from the W.V.S. towards the end of the year has been of great assistance. The clothing—mostly women's—consisted chiefly of pyjamas and underwear, and the fact that it could be given coupon free to patients in sanatoria has often hastened their admission.

The Almoner's contact with the Disablement Rehabilitation Officer at the Ministry of Labour has been used for the benefit of patients who were sufficiently recovered to return to work. In two cases young men who were previously engineers were sent to employment in the City Parks and have there found a new and stimulating interest in horticulture. The effect of this change of occupation on their health has been remarkable. Other patients have been helped to change their occupation, *e.g.*, a fitter became a book-keeper, a butcher became a kennel boy at the Greyhound Track, and in some instances patients have returned to lighter jobs with their original employer.

The Committee's Tuberculosis Patients' Care Fund has been used as in previous years to meet small and temporary financial difficulties for patients, such as the purchase of clothing, shoes, nightwear, etc., to hasten a patient's admission to a sanatorium. In one case tuition fees were paid to assist a patient to undergo a course of Commercial Training—maintenance fees were paid in respect of one child who was admitted to a War-time Day Nursery. In this case the patient was a widower, discharged from sanatorium, and it was felt that the continual care of a child under two years would have a bad effect on his condition, and also that his condition was a danger to the child. The results in this case have much more than justified the expenditure. Single utility beds have been provided in a number of cases where patients have been advised to obtain separate sleeping accommodation.

## LADYWELL HOSPITAL.

### Report for the Year 1945.

At the beginning of the year there were 149 patients in Hospital ; these, with the 1,265 admitted during the year, made a total of 1,414 cases under treatment. Of this total, 1,195 were discharged, 92 died, and 127 were in hospital at the end of the year. The number of cases treated, 1,414, compares with 1,753 in 1944, and with 1,525·4, the average number of cases treated for the previous five years, 1940-1944.

The cases treated were as follows :—

Scarlet fever .....	332
Mixed infections.....	23
Measles.....	59
Enteric fever .....	1
Diphtheria.....	257
Erysipelas .....	25
Puerperal Fever.....	19
Tuberculosis.....	185
Other diseases .....	513
	<hr/>
	1,414
	<hr/>

The number of cases admitted from \*Out-districts was 297, as compared with 321 in 1944. The daily average number of patients in 1945 was 126·4, the highest being 152 on 14th April, and the lowest 98 on the 17th August. The daily average number of Out-district patients was 25·4, compared with 26·6 in 1944, and with 30·8 for the previous five years, 1940-1944. One thousand, two hundred and sixty-five patients were admitted during the year, as compared with 1,591 in 1944, and with 1,408·8, the average for the previous five years, 1940-1944.

\* Eccles, Stretford, Urmston, Irlam, Manchester Port Sanitary Authority and Service patients.

The following summary shows the diagnosis of the cases before admission and after observation in hospital :—

	<i>Diagnosis before Admission.</i>	<i>Diagnosis after Observation.</i>
Scarlet fever .....	329	311
Mixed infections.....	3	15
Measles.....	47	39
Enteric fever .....	2	1
Diphtheria.....	406	235
Erysipelas .....	30	25
Puerperal fever .....	24	19
Tuberculosis.....	135	139
Other diseases .....	289	481
	<hr/>	<hr/>
	1,265	1,265
	<hr/>	<hr/>

Details of the alterations in diagnosis will be found in the Table V.

*Mixed Diseases.*—Twenty-one of the patients discharged were found to be suffering from two distinct diseases, as follows :—

Scarlet fever and diphtheria .....	2
Scarlet fever and chicken pox .....	4
Diphtheria and measles .....	1
Measles and whooping cough .....	1
Measles and dysentery .....	7
Dysentery and chicken pox .....	1
Chicken pox and measles .....	3
Tonsillitis and measles .....	1
Mumps and bronchitis .....	1
	—
	21
	—

*Deaths from Mixed Diseases.*—There were 2 deaths :—

Boy aged 6 months : Gastro-enteritis and dysentery. In hospital 19 days.

Woman aged 56 years : Tuberculosis and diabetes. In hospital 10 days.

The average stay in hospital for all mixed diseases cases discharged well in 1945 was 44·4 days.

*Cross Infection.*—The same remarks as last year apply to the situation ; the old wards are out of date and the new cubicle block is proving its worth. What is really wanted is another new cubicle block.

Four hundred and eighty-seven cases were admitted into the two wards of the cubicle block during the year.

The number of patients discharged in 1945 who contracted another infection was as follows :—

<i>Sent in as :—</i>		<i>Secondary Infection.</i>	
Dysentery.....	6	Measles and diphtheria .....	2
		Chicken pox .....	1
		Measles .....	2
		Measles and chicken pox .....	1
Diphtheria.....	1	Measles .....	1
Measles .....	1	Dysentery .....	1
Whooping cough.....	5	Dysentery .....	3
		Measles .....	1
		Dysentery and measles .....	1
Rhinitis.....	1	Erysipelas .....	1
Rubella .....	1	Dysentery .....	1
Scarlet fever.....	2	Diphtheria.....	1
		Chicken pox .....	1
	—		—
	17		17
	—		—



The average stay in hospital for the 17 cross-infected cases discharged well in 1945 was 62·0 days.

The average stay in hospital for all cases discharged well in 1945 was—for scarlet fever 29·3 days ; for mixed infections 49·2 days ; for measles 23·3 days ; for enteric fever 1 day (patient transferred) ; for diphtheria 41·7 days ; for erysipelas 17·5 days ; for puerperal fever 29·7 days ; for tuberculosis 70·0 days ; for other diseases 21·6 days.

*Deaths.*—The total number of fatal cases in 1945 was 92, as follows :—

Scarlet fever .....	1
Mixed infections.....	2
Measles.....	1
Diphtheria.....	5
Erysipelas .....	1
Tuberculosis.....	65
Broncho-pneumonia .....	2
Cerebral thrombosis .....	1
Chronic bronchitis.....	1
Dysentery .....	4
Gastro-enteritis .....	1
Poliomyelitis .....	1
Tuberculous meningitis.....	5
Whooping cough .....	2
	—
	92
	—

The average stay in hospital for all fatal cases excepting advanced tuberculosis was 19·5 days. The average stay for advanced tuberculosis cases was 98·2 days.

The daily average number of patients in hospital in 1945 was 126·4, as compared with 155·6 in 1944, and with 134·5 the daily average for the five years 1940-1944.

There were remaining in hospital on 31st December, 1945, 127 patients, as compared with 149 last year. The cases remaining were—scarlet fever 28 ; erysipelas 2 ; diphtheria 37 ; tuberculosis 42 ; other diseases 18.

## DETAILED INFORMATION ABOUT SOME DISEASES.

### Scarlet Fever.

The number of cases admitted was 311, as against 279 in 1944. Three hundred and twenty-nine were certified as having scarlet fever but in 27 cases the diagnosis had to be revised ; in addition, 1 case admitted as mixed infection, 6 as diphtheria, and 2 other diseases proved to be scarlet fever. Three hundred

and three cases were discharged well during the year, as against 286 last year. There was one death from scarlet fever, a woman 29 years; complications—relapses and chronic otitis media; in hospital 127 days. Penicillin, Sulphonamides and Sc. Antitoxin all proved unsuccessful.

The type of the disease was mild. Scarlatinal antitoxin was given intramuscularly in 3,000-10,000 unit doses to all but the very mildest cases. In addition, some Sulphonamide was given invariably, and Penicillin whenever condition indicated. The more important complications were as follows:—

	<i>Cases affected.</i>	<i>Percentage of Discharged cases.</i>
Adenitis and abscess (2) .....	6	1·96
Rhinitis.....	2	·65
Otorrhœa and otitis media .....	7	2·28

Other complications were as follows:—Abscess (face) 2; adenoids 1; bronchitis 2; burns 1; cataract 1; cut right eyebrow (B.A.) 1; furuncle 1; impetigo, pediculosis 1; rheumatism 1; rhinitis 1; serum reaction 1; whooping cough (?); bronchitis 1.

Two cases contracted another infection whilst in hospital:—Diphtheria 1; chicken pox 1.

The average stay in hospital for all cases discharged well was 29·3 days.

Thirty-four patients were immunised against diphtheria; 30 received two doses of A.P.T.; 4 received three doses of T.A.F. In addition, 5 patients received one dose of A.P.T.; 2 patients received two doses of T.A.F.; and 3 patients received one dose of T.A.F.

### **Diphtheria.**

Four hundred and six cases were admitted certified as diphtheria, but in 173 cases the diagnosis had to be revised; in addition, 2 other diseases proved to be diphtheria. In a large number (44) of the most severe cases, including fatal cases, part of the antitoxin was given intravenously, in some instances repeatedly, also Sulphonamides and Penicillin.

There were five deaths from this disease, in hospital 3, 14, 3, 4 and 36 days.

Of the discharged cases, 177 were faucial, 4 laryngeal, 2 faucial and nasal, 19 nasal. There were also 13 cases of bacteriological diphtheria. Penicillin was used as a spray for carriers.

### Faucial Diphtheria.

In 182 cases, including 5 fatal, the throat was affected.

*Mild.*—Eighty-seven cases were mild, the deposit on the throat being localised to the tonsils with little or no toxæmia. The average amount of serum given was 10,120 units. Two cases had antitoxin before admission.

*Complications.*—Furunculosis 1 ; pyelitis 1 ; scabies 1 ; tonsillectomy 1 ; tonsillitis 1.

*Moderate.*—In 44 cases the membrane was more extensive and was accompanied by toxæmia. The average amount of serum given was 35,250 units. Two cases received antitoxin before admission.

*Complications.*—Palatal paralysis, paresis of lower limbs 1 ; palatal paresis 2 ; scabies 1.

*Severe.*—Fifty-one cases, including 5 fatal, were of the severe type. The amount of serum given averaged 65,125 units to the cases discharged, and 100,000 units to the fatal cases. One of the discharged cases received antitoxin before admission.

*Complications.*—Adenitis 2 ; impetigo 1 ; palatal paresis 4 ; palatal paresis, cycloplegia 1 ; paresis (lower limbs) 1 ; sore throat (hæm. streps) endocarditis 1 ; strabismus 1.

### Laryngeal Diphtheria.

In 4 cases the larynx was involved.

*Mild.*—In 2 cases the laryngeal obstruction was slight. The average amount of serum given was 40,000 units.

*Complications.*—Nil.

*Moderate.*—In 1 case the laryngeal obstruction was moderately severe. The amount of serum given was 40,000 units.

*Severe.*—One case of severe type received 80,000 units. Tracheotomy was performed and recovery followed.

### Nasal Diphtheria.

There were 19 cases of a mild type, the average amount of serum given being 6,900 units.

*Complications.*—Otorrhœa (B.A.) 1 ; otorrhœa (chronic) right 1.



### Faucial and Nasal Diphtheria.

There were two mild cases of this type ; they each received 8,000 units of antitoxin.

*Complications.*—Tonsillectomy 1.

The following Table summarises the sites of membrane in the total clinical cases discharged :—

Site of Membrane	Mild.		Moderate.		Severe.		Total.	
	Re-covered	Died	Re-covered	Died	Re-covered	Died	Re-covered	Died
Faucial .....	87	...	44	...	46	5	177	5
Laryngeal .....	2	...	1	...	1	...	4	...
Faucial and Laryngeal	...	...	...	...	...	...	...	...
Nasal.....	19	...	...	...	...	...	19	...
Faucial and Nasal ....	2	...	...	...	...	...	2	...
TOTALS ....	110	...	45	...	47	5	202	5

*Diphtheritic Paralysis.*—8 or 4·12 per cent. of the clinical cases discharged had paralysis in one form or another whilst in hospital.

*Complications.*—26 or 12·5 per cent. of the recovered cases developed one or more complications. This figure does not include serum rashes.

Tracheotomy was performed in 1 severe laryngeal case ; patient discharged after 21 days in hospital.

*Fatality Rate.*—5 or 2·43 per cent. of the clinical cases admitted proved fatal.

*Antitoxin.*—5 or 2·41 per cent. of the cases discharged had antitoxin before admission to hospital. The average amount of serum given in hospital in the recovered cases was 24,200 units and 100,000 units in the fatal cases. Forty-four cases, including 4 fatal, had part of the serum injected intravenously.

*Cross Infection.*—One case contracted measles whilst in hospital.

*Average Stay.*—The average stay in hospital for all cases discharged well was 41·7 days, and for the fatal cases 12·0 days.

### Puerperal Fever.

Twenty-four cases were admitted under this diagnosis, but 2 proved to be tuberculosis ; 4 septic abortion ; 1 case of erysipelas proved to be puerperal sepsis. The 19 cases discharged were classified as follows :—Puerperal fever 1 ; puerperal sepsis 18. Average stay in hospital 28·0 days.

There were no fatal cases.

*Complications in the discharged cases.*—Phlegmasia alba dolens 4 ; abscess (breast) incision 1.

There were 18 babies admitted with their mothers.

### Erysipelas.

Thirty cases were admitted as erysipelas during the year, but in 5 cases the diagnosis had to be revised, viz. :—Puerperal fever 1 ; cellulitis 1 ; pustular dermatitis 1 ; herpes 1 ; scurvy 1. The average stay in hospital for the discharged cases was 17·6 days. There was one fatal case, a man aged 62 years, in hospital two days. Complication : Myocarditis.

*Complications.*—Dermatitis 1.

### Measles.

Forty-seven cases were admitted during the year as measles, but of these 2 proved to be mixed infections ; 3 bronchitis ; 2 erythema ; 2 pneumonia ; 1 coryza ; 1 impetigo ; 1 pyelitis. In addition, 1 scarlet fever and 3 other diseases proved to be measles.

There was one death from this disease, a boy 9 months old, in hospital 14 days.

The average stay in hospital for the discharged cases was 19·5 days.

*Complications of the discharged cases.*—Adenitis 1 ; empyema 1 ; broncho-pneumonia 4 ; otorrhœa 5 ; otitis media 1 ; stomatitis 1 ; impetigo 2 ; tonsillitis, adenitis 1 ; broncho-pneumonia, pyelitis, abscess (arm) 1.

*Complication of the one fatal case.*—Broncho-pneumonia.

### Operations.

The number of operations was 6, all requiring general anæsthesia. Minor operations are not included. Numerous incisions were done on the wards, mostly requiring local anæsthesia only. The operations tabulated below were carried out on A-2 Ward in the Cubicle Block.

Sex.	Age.	Disease.	Operation.	Days in.	R'cd.	Died.	Total.
M.	3	Diphtheria (virulent carrier).	Tonsils and adenoids.	141	1	...	1
M.	3	Diphtheria (mild faucial and nasal).	Do.	90	1	...	1
F.	21	Diphtheria (Moderate faucial).	Tonsillectomy	54	1	...	1
F.	15	Diphtheria (mild faucial).	Do.	51	1	—	1
M.	9	Diphtheria (carrier).	Tonsils and adenoids.	48	1	...	1
M.	8	Diphtheria (mild faucial).	Do.	12	1	...	1
				...	6	...	6

### Staff.

The staff, both nurses and maids, are tested on entering by the Schick and Dick tests and if positive, immunised against diphtheria and scarlet fever. Thirty-six were Schick tested and 5 were positive; these were inoculated with three doses of toxoid-antitoxin floccules at fortnightly intervals, and on retest proved to be negative.

Twenty-eight were tested by the Dick test, 6 being positive; these were inoculated with scarlatinal toxin and on retest a month later, all proved negative.

*Work of the Training School.*—During the year, 6 nurses passed the Preliminary and 13 the Final State Examinations. The usual course of lectures was given by the Medical Staff and the Sister Tutor.



## ANNUAL STATEMENT.

Disease.	No. of Cases Remaining on Dec. 31st, 1944.	No. of Cases Admitted. 1945.	No. of Cases Treated. 1945.	No. of Cases Discharged. 1945.	No. of Deaths. 1945.	No. of Cases Remaining on Dec. 31st, 1945.
Scarlet fever .....	21	311	332	303	1	28
Mixed infections.....	8	15	23	21	2	...
Measles.....	20	39	59	58	1	...
Enteric fever .....	...	1	1	1	...	...
Diphtheria.....	22	235	257	215	5	37
Erysipelas .....	...	25	25	22	1	2
Puerperal fever .....	...	19	19	19	...	...
Tuberculosis.....	46	139	185	78	65	42
Other diseases .....	32	481	513	478	17	18
*TOTALS .....	149	1265	1414	1195	92	127
Corresponding figures 1944....	162	1591	1753	1492	112	149
Average, 5 years 1940-1944...	...	1408.8	1525.4	1281.6	106.4	...
*Out-district cases included in 1945 totals.....	21	297	318	290	8	20
Corresponding figures, 1944...	24	321	345	316	8	21

## ANNUAL REPORT OF THE CITY PATHOLOGIST, 1945.

The appended table gives a list of the examinations carried out at the City Public Health Bacteriological Laboratory during 1945. A total of 24,271 specimens was examined, including 239 from the Boroughs of Prestwich, Whitefield, Hazel Grove, Eccles and Stretford.

In addition, as shown in report from Clinical Pathology Laboratory for Hope Hospital, a total of 34,314 specimens was examined there, giving a grand total of 58,585.

### Dysentery.

The following dysentery organisms were isolated from faeces sent for examination to the City Laboratory, Regent Road, during 1945 :—

B. Dysentery Sonne .....	75 cases.
B. Dysentery Flexner Z .....	1 case.

The Sonne cases occurred throughout the year and showed no seasonal incidence apart from a minor outbreak in May at one of the Day Nurseries.

Dysentery organisms were also isolated from cases in Hope Hospital as follows :—

B. Dysentery Sonne .....	45 cases.
B. Dysentery Flexner .....	4 cases.
B. Dysentery Newcastle .....	2 cases.

### Epidemic Diarrhoea and Vomiting.

Epidemic diarrhoea and vomiting seems to have been endemic in Salford and surrounding district throughout the year, reaching epidemic proportions during May, June and July.

An outbreak occurred at Hope Hospital among the staff and patients during May. A small number of cases also occurred throughout June, July and August.

An account of this was published in the British Medical Journal, October 20th, 1945, vol. II, page 524.

A total of 111 cases was described in the hospital outbreak, 20 of these were cases admitted to hospital suffering from the disease, the remaining 91 cases, including 27 members of the nursing staff and 22 babies, acquired the condition in hospital. The outbreak was mainly confined to two of the Maternity Wards. None of the patients were dangerously ill and there was no mortality. Characteristic symptoms were diarrhoea with profuse watery stools, usually nausea and sometimes vomiting. The average duration of symptoms was 4-6 days.

A questionnaire sent to 20 of the principal Salford practitioners revealed that a similar concurrent epidemic was rife in the district. The general impression was that when the disease occurred in a family it occasionally spread to all members of the household, usually at intervals of two to four days. As a rule it did not spread to all members but picked out a portion of them.

The number of new cases seen by each practitioner varied from three to four a day in some practices to as many as 15 to 20 daily in others, while the epidemic was at its height—mainly during May and June.

Most of the practitioners stressed the fact that they could not remember a similar epidemic of gastro-enteritis occurring in their practices and considered it a new type of infection. We have no records or recollection of a similar outbreak at the hospital or in the surrounding district during our period of residence here—over 17 years. From reports received, we have good reason to believe that a similar type of diarrhoea and vomiting has been widespread over the country during 1945.

Fæces from all the cases affected in hospital and also from cases sent by general practitioners were examined bacteriologically and a number of them microscopically, with completely negative results.

Epidemic diarrhoea and vomiting appears to be common and widespread in the United States. Reiman et al J.A.M.A., 1945, gave a full account of the disease as it occurs in America and other countries, and incidentally states that localised explosive epidemics are often mistaken for outbreaks of food poisoning.

He considers that the disease is probably due to a filterable virus and states that the transfer of infection to human volunteers, by inhalation of filtered naso pharyngeal washings and fæcal filtrates from patients, has given encouraging results.

This would suggest that the disease may be airborne and epidemiological evidence tends to support this view.

As noted above, infection does not appear to have been common in Britain until recently, which suggests that it may have spread from American camps during the war years. Although the epidemic peak occurred in Salford during May, June and July, small sporadic outbreaks continued to occur throughout the year.

#### Food Poisoning.

During 1945, there were five explosive outbreaks of acute diarrhoea, sometimes associated with vomiting, at various schools throughout the city. One outbreak occurred in February, two in May, one in October and one in November.

Four of these apparently followed meals distributed from the food centres and one was attributed to ice cream supplied by an outside vendor. The interval between the consumption of the food and occurrence of symptoms was usually 12 to 14 hours, which does not suggest a toxin; also the proportion of people affected after consumption of the suspected meal was lower than is usually found in a true food poisoning outbreak. No pathogenic organisms were isolated from the fæces of any of the patients affected or from the remains of the suspected meals, nor could any chemical cause be detected. It is possible that these were explosive outbreaks of epidemic diarrhoea and vomiting, but on the whole the evidence available does not support this view especially as no definite secondary cases were detected following the outbreaks. A further possibility that the outbreaks were due to rapid multiplication of non-pathogenic



bacteria in the food caused by storage at unsuitable temperature was suspected but not proven.

### Ice Cream.

A number of samples of ice cream were examined during the summer. Eighty per cent. of these showed total bacterial counts ranging from two to twenty-two hundred million organisms per c.c. with *B. Coli* present in 1/1000 of c.c.

As pointed out in the Sanitary Inspector's report this gross bacterial contamination is mainly due to lack of heat treatment during manufacture and storage at sufficiently low temperature afterwards. The following experiment, carried out in the laboratory at the request of the Sanitary Inspector, demonstrates the efficiency of heat treatment on a typical ice cream mix.

Made two mixes of ice cream each with the following ingredients :—

Dried Milk .....	28 grammes.
Sugar .....	35 grammes.
Ice Cream Mixture (Cornflour) .....	7 grammes.
Gelatine .....	2 grammes.
Water.....	280 c.c's.
Vanilla Flavour .....	—

Cold mix was stirred until a complete solution was made and then it was placed in the refrigerator and kept at 41° F.

The other mix was heated to 163° F. and held at that temperature for ten minutes, after which it was placed in the refrigerator and kept at 41° F.

*Tuesday, 24th July, 1945.*

The two ice cream mixes were removed from the refrigerator at 10-0 a.m. and samples taken for plate count and coliform test.

*Friday, 27th July, 1945.*

COLD MIX .....	Plate count: 1,520,000 colonies per m.l. Coliform test: <i>B. Coli</i> present in each of three tubes of 1/1000.
HEAT-TREATED MIX .....	Plate count: 1,280 colonies per m.l. Coliform test: <i>B. Coli</i> absent in each of three tubes of 1/10.

### Examination of Beer Glasses.

A number of beer glasses was collected at random by the Sanitary Inspector from various public houses and taken to the laboratory for bacteriological examination. These glasses are often inefficiently washed. They were examined bacteriologically by coating them inside with a thin layer of gelatine and incubating them at 22° C.

Dirty glasses showed a copious growth of bacterial colonies which was demonstrated to the publicans concerned.

The standard of cleanliness adopted was based on that used for milk bottles which requires that a clean milk bottle should have not more than one colony per c.c. of bottle space.

### Examination of Water Supplies.

Salford has two main sources of water supplied by Manchester Corporation reservoirs. Routine bacteriological tests of these supplies did not give such satisfactory results as in 1944. The water supplied to the Pendleton area which is drawn from Thirlmere gave consistent satisfactory results.

The Regent Road area supply, which is mainly drawn from the Longden-dale reservoirs, gave an unsatisfactory high B. Coli count on several occasions during the latter half of the year. Routine samples are taken in conjunction with the Manchester Waterworks laboratory, and on occasions when persistent unsatisfactory results are found, chlorine is increased until satisfactory results are obtained. The following table shows a result of the examinations made throughout the year.

RESULTS OF EXAMINATIONS MADE ON THE CITY'S TWO WATER SUPPLIES  
DURING 1945.

MONTH.	REGENT ROAD.			HOPE HOSPITAL.		
1945.	Count 22° C.	Count 37° C.	B. Coli per 100 M.L.	Count 22° C.	Count 37° C.	B. Coli per 100 M.L.
January .....	5	2	0	4	2	0
February .....	12	0	0	16	9	0
March .....	51	2	0	5	1	1
April.....	38	5	0	15	2	0
May .....	26	5	1	8	5	1
June.....	17	3	0	15	8	0
July.....	78	36	13	17	3	0
August.....	33	17	0	10	8	0
September .....	46	6	35	32	7	0
October .....	32	18	0	10	5	0
November .....	10	1	0	10	1	0
December .....	9	4	13	5	1	0

### Swimming Baths.

The appended table gives the results of bacteriological examinations of swimming bath water during 1945.

EXAMINATION OF SWIMMING BATH WATER.

Bath.	Good.	Fair.	Bad.	Total.
Seedley, Ladies .....	15	1	4	20
Seedley, 2nd Class .....	20	1	3	24
Blackfriars, Large .....	13	3	5	21
Blackfriars, Small.....	12	2	3	17
TOTAL .....	60	7	15	82

GOOD = Bacterial Count under 1,000 per M.L.  
 FAIR =     "         "     of 1,000-3,000 per M.L.  
 BAD =     "         "     of over 3,000 per M.L.

### Typing of Diphtheria Bacilli.

All diphtheria organisms isolated from positive swabs sent to the City Laboratory from Salford cases during 1945 were types as shown in the table below :—

TYPING OF C. DIPHTHERIA.

Source of Specimen.	Gravis.	Intermediate.	Mitis.	Total.
Throat.....	53	57	23	133
Nose .....	12	4	2	18
TOTAL .....	65	61	25	151

An account of the Blood Transfusion and Penicillin Services, which are under laboratory control, is given in the Laboratory Report for Hope Hospital.

### Examinations made in the Salford Public Health Laboratories, Regent Road, Salford, 6, during 1945.

Hæmoglobin estimations .....	1,271
Widal reactions .....	17
Wassermann tests .....	6,395
Kahn tests .....	9,627
Gonorrhœal complement fixation tests .....	1,543
Smears for Gonococci .....	64
Gonococcal cultures .....	167
Milk, counts.....	232
„ methylene blue tests.....	232
„ bacillus coli tests.....	232
„ direct, microscopical tests for m. tuberculosis .....	8
„ bottles for sterility .....	15
Examination of swabs for c. diphtheria.....	2,239
„ „ „ hæmolytic streptococci.....	55
„ „ „ organisms .....	4
„ „ „ penicillin sensitivity.....	24
„ „ sputa for m. tuberculosis .....	1,038
„ „ „ „ organisms.....	4
„ „ urine.....	17
„ „ fæces .....	350
„ „ rectal swabs.....	42
„ „ drinking water.....	32
„ „ swimming bath water.....	82
„ „ food for food poisoning organisms .....	58
„ „ beasts' ears for anthrax bacilli.....	6
„ „ hairs, for ringworm parasites .....	4
Rideal Walker tests (disinfectants).....	19
Preparation of autogenous vaccines .....	4
Typing of c. diphtheria .....	151
„ „ coliform organisms.....	89
Various examinations .....	11
	<hr/> 24,032 <hr/>



## EXAMINATIONS MADE FOR OTHER AUTHORITIES DURING 1945.

Examination.	Prestwich.	Whitefield.	Hazel Grove.	Eccles.	Stretford.	Total.
Swabs for C. Diphtheria .....	107	15	—	—	—	122
"    Ham. Streptococci.....	2	—	—	—	—	2
Rectal Swabs .....	1	—	—	—	—	1
Sputa for M. Tuberculosis.....	15	—	—	—	—	15
Milk, Methylene Blue Tests .....	10	—	17	25	—	52
"    B. Coli Tests .....	6	—	17	—	—	23
"    Counts .....	—	—	1	—	—	1
"    G. Pig Inoculations.....	3	—	6	—	—	9
"    for Br. Abortus.....	2	—	—	—	—	2
"    Resazurin .....	1	—	—	—	—	1
Drinking Water.....	4	—	—	—	1	5
Swimming Bath Water.....	—	—	—	1	—	1
Virulence Tests .....	2	—	—	—	—	2
Canned Foods for Food Poisoning .....	2	1	—	—	—	3
<b>TOTAL .....</b>	<b>155</b>	<b>16</b>	<b>41</b>	<b>26</b>	<b>1</b>	<b>239</b>

## CITY ANALYST'S REPORT.

During the year 1945 the following analyses and tests have been made :—

Food and Drugs Act samples from the City of Salford.....	1,628
Food and Drugs Act samples from the Borough of Eccles ...	127
Food and Drugs Act samples from the Borough of Stretford...	179
Milk samples—" Appeal to Cow " (from all sources).....	6
Milk samples—Phosphatase tests (from all sources) .....	292
Fertilisers and Feeding Stuffs Act samples .....	8
Pharmacy and Poisons Act samples .....	5
Rag Flock Act samples (from all sources) .....	1
Waters (including swimming bath waters) .....	130
Contract samples examined for the Central Purchasing Com- mittee .....	66
Other miscellaneous samples .....	108
Sunlight tests .....	948
Volumetric sulphur tests .....	256
	3,754

The number of food and drugs samples analysed for the City during the year under review is the highest examined in any year since the laboratory first opened in 1914. In addition, the number of phosphatase tests carried out on milk samples shows a very considerable increase on the figure for 1944. It was only possible to carry out the work required on this increased number of samples by temporarily discontinuing sunlight tests for several months of the year.

The following table (Table 1) contains particulars of 1,628 samples examined for the City of Salford, under the Food and Drugs Act, 1938, during the year 1945.

**TABLE 1.**

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk .....	1,147	...	40	3·5
Condensed Milk .....	4	...	...	...
Dried Milk .....	3	...	...	...
Butter .....	46	...	...	...
Margarine .....	48	...	...	...
Cheese .....	48	...	...	...
Lard .....	48	...	...	...
Sugar.....	44	...	...	...
Tea.....	27	...	...	...
Cocoa.....	9	...	...	...
Drinking Chocolate.....	1	...	...	...
Coffee.....	1	...	...	...
Coffee and Chicory.....	2	...	...	...
Flour .....	1	...	...	...
Self-raising Flour.....	10	...	...	...
Semolina .....	6	...	...	...
Scone Mixture.....	1	...	...	...
Sponge Pudding Mixture ...	1	...	...	...
Biscuits.....	1	...	1	100·0
Starch Reduced Biscuits ...	1	...	...	...
Starch Reduced Bread .....	2	...	1	50·0
Pearl Barley .....	3	...	...	...
Baking Powder .....	4	...	2	50·0
Jam .....	5	...	1	20·0
Low Sugar Jam.....	1	...	1	100·0

TABLE 1—Continued.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration
		Preservatives Only.	Other Ways.	
Marmalade .....	1	...	1	100·0
Golden Syrup .....	2	...	...	...
Treacle .....	1	...	...	...
Lemon Cheese .....	2	...	...	...
Orange Curd.....	1	...	...	...
Chocolate Spread.....	2	...	...	...
Tinned Soup.....	5	...	...	...
Tinned Fish.....	6	...	...	...
Tinned Mixed Vegetables...	3	...	...	...
Tinned Meat and Vegetables	2	...	...	...
Tinned Baked Beans.....	3	...	...	...
Pork Sausage .....	3	1	...	33·3
Fish Paste .....	3	...	2	66·6
Dried Egg .....	3	...	...	...
Ice Cream.....	4	...	...	...
Malt Vinegar .....	6	...	...	...
Butter Toffee .....	1	...	...	...
Malted Food.....	2	...	1	50·0
Mustard.....	5	...	2	40·0
Mustard Compound .....	4	...	1	25·0
Pepper .....	3	...	...	...
Ground Ginger .....	3	...	...	...
Ground Nutmeg.....	1	...	...	...
Ground Cinnamon .....	1	...	...	...
Ruby Wine (Port type) ....	1	...	...	...
Gelatine.....	5	...	1	20·0
Salad Oil with Raspberry Vinegar .....	1	...	...	...
Coffee Essence with Chicory	1	...	...	...
Graving Browning .....	2	...	...	...
Syrup with Halibut Oil.....	1	...	...	...
Malt Extract with Cod Liver Oil.....	2	...	...	...
Saccharin Tablets .....	1	...	...	...
Sweetening Tablets .....	1	...	...	...
Fruit Preserving Tablets ...	2	...	...	...
Cough Mixture .....	5	...	...	...
Influenza Mixture.....	2	...	...	...
Influenza Powders .....	3	...	...	...
Headache Powders.....	3	...	...	...
Tincture of Iodine .....	1	...	1	100·0
Seidlitz Powders .....	5	...	1	20·0
Epsom Salts.....	6	...	...	...
Glauber Salts .....	6	...	...	...
Bicarbonate of Soda .....	4	...	...	...
Borax.....	3	...	2	66·6
Glycerin of Borax .....	3	...	...	...
Boracic Ointment .....	5	...	...	...
Zinc Ointment.....	8	...	...	...
Fullers Earth Ointment.....	3	...	1	33·3
Mercury Ointment.....	2	...	1	50·0
White Precipitate Ointment	1	...	...	...
Indigestion Mixture .....	1	...	...	...
Compound Syrup of Figs....	4	...	2	50·0
Chocolate Laxative.....	3	...	...	...
Laxative Syrup.....	1	...	...	...
Cod Liver Oil.....	2	...	...	...
Camphorated Oil .....	3	...	1	33·3
Castor Oil.....	3	...	...	...
Medicinal Paraffin .....	3	...	...	...
	1,628	1	63	3·9



TABLE 2.

## PERCENTAGE ADULTERATION—SALFORD.

Year.	1936.	1937.	1938.	1939.	1940.	1941.	1942.	1943.	1944.	1945.
Percentage of Adulteration ...	4.6	7.1	7.2	7.1	6.9	7.2	6.1	3.7	3.1	3.9
Total Samples ...	1329	1323	1284	1353	1344	1296	1512	1555	1513	1628
Formal Samples..	524	456	396	377	406	427	464	499	427	385
Informal Samples	805	867	888	976	714	753	884	833	891	1077
Private Samples	...	...	...	...	224	116	164	223	195	166
No. of Samples per 100,000 of the population...	633	642	636	679	685	*748	946	1014	989	1045

\* Calculated on civil population only from 1941 onwards.

TABLE 3.

## ADULTERATION OF MILK—SALFORD.

Year.	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
No. of Samples...	1027	1020	1006	923	930	923	919	883	995	1107	1074	1147
Percentage of Adulteration.....	1.2	4.6	3.0	5.9	6.2	6.5	5.4	5.7	6.2	3.1	1.9	3.5

TABLE 4.

## MILK ADULTERATION—ENGLAND AND WALES.

Year.	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939-1945
Percentage of Adulteration.....	7.8	6.6	6.4	7.3	7.7	7.2	7.4	6.7	7.0	7.7	Not available.

TABLE 5.

AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	88	12.17 { 12.28 12.17 12.08	3.58 { 3.65 3.59 3.52	8.59 { 8.63 8.58 8.56
February .....	98			
March.....	93			
April .....	101	12.08 { 12.01 12.11 12.12	3.42 { 3.44 3.38 3.41	8.66 { 8.57 8.73 8.71
May .....	67			
June .....	116			
July .....	106	12.27 { 12.17 12.18 12.55	3.61 { 3.54 3.51 3.83	8.66 { 8.63 8.67 8.72
August .....	84			
September.....	71			
October.....	128	12.44 { 12.58 12.42 12.23	3.74 { 3.84 3.73 3.59	8.70 { 8.74 8.69 8.64
November.....	113			
December .....	82			
	1,147	12.25	3.59	8.66

TABLE 6.

AVERAGE COMPOSITION OF FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	22	12.21 { 12.38 12.08 12.21	3.63 { 3.74 3.53 3.64	8.58 { 8.64 8.55 8.57
February .....	30			
March.....	23			
April .....	35	12.04 { 12.02 ... 12.06	3.43 { 3.46 ... 3.41	8.61 { 8.56 ... 8.65
May .....	...			
June .....	48			
July .....	40	12.44 { 12.31 12.23 12.99	3.71 { 3.62 3.48 4.20	8.73 { 8.69 8.75 8.79
August .....	17			
September.....	16			
October.....	36	12.56 { 12.78 12.48 12.01	3.85 { 4.00 3.80 3.48	8.71 { 8.78 8.68 8.53
November.....	32			
December .....	10			
	309	12.31	3.65	8.66

TABLE 7.

AVERAGE COMPOSITION OF MILK OTHER THAN FARMERS' MILK.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	66	12.16	3.57	8.59
February .....	68			
March.....	70			
April .....	66	12.10	3.41	8.69
May .....	67			
June .....	68			
July .....	66	12.21	3.57	8.64
August .....	67			
September.....	55			
October.....	92	12.49	3.72	8.77
November.....	81			
December .....	72			
	838	12.25	3.57	8.68

TABLE 8.

AVERAGE COMPOSITION OF ALL MILK—SALFORD.

Year.	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Fat ....	% 3.55	% 3.65	% 3.66	% 3.67	% 3.64	% 3.61	% 3.66	% 3.69	% 3.66	% 3.63	% 3.64	% 3.59
Solids not-fat	8.83	8.85	8.89	8.85	8.83	8.79	8.70	8.65	8.63	8.69	8.73	8.66
Total Solids	12.38	12.50	12.55	12.52	12.47	12.40	12.36	12.34	12.29	12.32	12.37	12.25

In Tables 9 and 13 will be found details of 63 samples reported upon as adulterated, a figure corresponding to 3.9 per cent. adulteration for the year in Salford. This figure is in close agreement with the corresponding figure for the last two years. As will be noted from a study of the analysis of milk adulteration given later in this report, it will be observed that a big proportion of the samples reported upon as adulterated consisted of milks showing deficiencies in fat content or solids-not-fat of less than 10 per cent. or 3 per cent. respectively. In the majority of cases the offences were not of a very serious nature and these were dealt with by letters of caution. Legal proceedings were, however, instituted in four cases. The fines (including costs) inflicted in these cases amounted to £58 4s. 0d.



TABLE 9.

## MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 802 .....	2·7% extraneous water F.Pt. Hortvet —0·517...	Prosecution and conviction.....	Fined £20 and £12 12s. 0d. costs.
A 805 .....	4·0% extraneous water F.Pt. Hortvet —0·513...		
A 806 .....	3·9% extraneous water F.Pt. Hortvet —0·513...		
A 807 .....	4·2% extraneous water F.Pt. Hortvet —0·513...		
A 808 .....	4·1% extraneous water F.Pt. Hortvet —0·513...		
B 268 .....	1·2% extraneous water F.Pt. Hortvet —0·518.....	Formal samples taken .....	See Nos. A813 and A814.
A 813 .....	2·8% extraneous water F.Pt. Hortvet —0·527...	Farmer cautioned.....	See special observations.
A 814 .....	Deficient 15·0% milk fat and contained 2·9% extraneous water F.Pt. Hortvet —0·523.....		
A 840 .....	1·0% extraneous water F.Pt. Hortvet —0·518.....	Caution.....	Sterilised milk.
B 379 .....	Deficient 40·0% milk fat.....	Formal samples taken Farmer written .....	See No. A853. Also poor in solids-not-fat.
A 853 .....	Deficient 6·6% milk fat .....		
A 869 .....	2·6% extraneous water F.Pt. Hortvet —0·515.....	Caution.....	Bottled milk.
B 481 .....	5·9% extraneous water F.Pt. Hortvet —0·500.....	Formal samples genuine .....	Informal sample.
B 482 .....	Deficient 10·0% milk fat .....	Farmer written .....	Supply also poor in solids-not-fat.
A 894 .....	Deficient 3·3% milk fat.....	No action.....	Also poor naturally in solids-not-fat.
A 912 .....	1·0% extraneous water F.Pt. Hortvet —0·528.....	Dairy company notified .....	Sterilised milk.
B 596 .....	Deficient 3·3% milk fat.....	Supply ceased.....	Farm milk.
B 611 .....	Deficient 5·0% milk fat.....	Further samples genuine .....	Farm milk.
B 612 .....	Deficient 1·6% milk fat.....	Further samples genuine .....	Farm milk.
B 734 .....	Deficient 5·0% milk fat.....	Further samples genuine .....	Farm milk.

TABLE 9—Continued.

No.	Nature of Adulteration.	Action Taken.	Remarks.
A 956 .....	Deficient 7.6% milk fat .....	Further samples genuine .....	Bottled milk.
A 959 .....	Deficient 8.3% milk fat .....	See No. A967.....	Bottled milk.
A 967 .....	Deficient 6.6% milk fat .....	Farmer written .....	Farm supply No. A959.
B 761 .....	Deficient 16.6% milk fat .....	Farmer written .....	See sample No. B791.
B 764 .....	1.1% extraneous water F.Pt. Hortvet —0.528.....	Farmer written .....	See sample No. B818.
B 789 .....	Deficient 10.0% milk fat .....	Farmer written .....	See sample No. B791.
B 791 .....	Deficient 6.6% milk fat .....	Farmer written .....	See special observations.
B 818 .....	Deficient 13.3% milk fat .....	Farmer written .....	Also naturally poor in solids-not-fat.
B 833 .....	Deficient 13.3% milk fat .....	Formal samples obtained .....	See sample No. A1017.
B 882 .....	Deficient 3.3% milk fat .....	Further samples genuine .....	Farm milk.
A 998 .....	Deficient 4.6% milk fat and contained 6.6% extraneous water F.Pt. Hortvet —0.485.....	Prosecution and conviction. Fined £10 and £3 3s. 0d. costs.	Bottled milk.
A 1017.....	Deficient 5% milk fat .....	Farmer cautioned .....	Two other samples genuine.
B 1033.....	Deficient 5.0% milk fat .....	Formal samples genuine .....	Farm milk.
B 1036.....	Deficient 10.0% milk fat .....	Formal samples genuine .....	Farm milk.
A 1123.....	Deficient 5.0% milk fat .....	Wholesale supply genuine .....	Cautioned retail dairy-man.
A 1125.....	Deficient 10.0% milk fat .....	See samples Nos. A1160 and A1161.	Informal sample.
B 1394.....	2.3% extraneous water F.Pt. Hortvet —0.513.....	Prosecution and conviction. Fined £3 and £5 5s. 0d. costs.	Farm milk.
A 1160.....	Deficient 3.3% fat and contained 3.5% extraneous water F.Pt. Hortvet —0.505.....	Caution.....	Bottled milk.
A 1161.....	6.8% extraneous water F.Pt. Hortvet —0.500...		
A 1180.....	3.4% extraneous water F.Pt. Hortvet —0.512.....		

**Milk.**

One thousand, one hundred and forty-seven samples of milk were examined during the year, 309 being samples of farmers' milk taken in course of delivery to wholesalers and retailers in Salford. As will be noted from Tables 5, 6 and 7, the average butter fat content of all milk for the whole year was 3·59 per cent., that of farmers' milk being 3·65 per cent. and that of milk from all other sources 3·57 per cent. The farmers' milk, therefore, showing, if anything, a very slightly higher figure for butter fat.

The improvement noted during the last two years in the number of milk samples which were poor in solids-not-fat compared with the presumptive limits of the Sale of Milk Regulations, 1939, but which were nevertheless adjudged genuine on the Hortvet freezing point test, has been maintained. Thirty-nine samples of milk come under this heading, and were distributed over the whole of the year, 16 being taken in the March quarter, 12 in the June quarter, 6 in the September quarter and 5 in the December quarter.

The number of milks naturally poor in solids-not-fat, but adjudged genuine on the Hortvet freezing point test examined during the four preceding years was as follows:—61 samples in the year 1941, 72 samples in the year 1942, 36 samples in the year 1943 and 17 samples in the year 1944.

**TABLE 10.**

AVERAGE BUTTERFAT CONTENT OF MILK—SALFORD.

Year.	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
All Milks .....	3·66	3·67	3·64	3·61	3·66	3·69	3·66	3·63	3·64	3·59
Farmers' Milks ....	3·73	3·74	3·69	3·62	3·70	3·71	3·71	3·62	3·74	3·65
Other than Farmers' Milks...	3·62	3·60	3·59	3·60	3·64	3·67	3·64	3·64	3·62	3·57

Forty samples of milk were reported upon as adulterated during the year. These samples were all below either the presumptive limits of 3 per cent. butter fat or that of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939. Before a milk was reported upon as adulterated due to deficiency in solids-not-fat, it was submitted to the Hortvet freezing point test, any samples passing this test were certified as naturally deficient. The above figure represents a percentage adulteration of 3·5 per cent. The figure for milk adulteration throughout England and Wales during the last 12 years for which figures are available varied from 6·4 per cent. to 8·2 per cent., so that in the light of this the Salford figure cannot be considered unsatisfactory.



In the following table will be found particulars of the various types of adulteration and the number of samples under each heading :—

Milks deficient in fat only .....	22 or 1·9%
Milks containing added water only .....	15 or 1·3%
Milks deficient in fat and containing added water.....	3 or 0·3%
	<hr/>
	40 or 3·5%
	<hr/>
Milks containing more than 3% added water .....	9 or 0·8%
Milks 10% or more deficient in fat.....	9 or 0·8%

No samples contained colouring matter or preservative. The next paragraphs give brief accounts of the more interesting adulterated samples.

#### Samples Nos. A802, A805, A806, A807 and A808.

These formal samples of bottled sterilised milk purchased by the Sampling Officer from a dairy company's vehicle (the first sample on the 5th January, the other four samples on the 8th January) were found upon analysis to contain respectively the following percentages of solids-not-fat :—8·27, 8·16, 8·17, 8·14 and 8·15. Comparison of these results with the minimum presumptive limit of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939, shows that the samples contained respectively at least the following percentages of extraneous water, 2·7, 4·0, 3·9, 4·2 and 4·1. The freezing points of all the samples confirmed the presence of extraneous water. This milk was bulked and processed by the dairy company and should, therefore, have been of good quality. Legal proceedings were instituted and the summonses were heard before the Stipendiary Magistrate on the 28th and 29th May, 1945. The defendant company (represented by Mr. W. Gorman, K.C. and Mr. C. N. Glidewell) had brought in the Minister of Food under Section 83 (1) of the Food and Drugs Act, who, in turn had laid information against the Milk Marketing Board. The defendant company had also issued a notice under the Third Schedule of the Act requesting the Corporation to take samples on delivery from the Minister of Food from a "Corresponding Milking" although the milk actually sampled by the Sampling Officer was in fact the mixed milk of a number of farms and a number of separate milkings. The validity of this notice was questioned by the Corporation and it had, therefore, not been acted upon. After a full hearing and two visits paid by the Stipendiary Magistrate to the dairy in question, a considered decision was given by him on the 11th June, 1945. The Stipendiary Magistrate found for the Corporation against the dairy company and he dismissed both the Minister of Food, and the Milk Marketing Board from the proceedings. The defendant company was fined £10 on the first summons, £2 10s. 0d. on each of the other four summonses and £12 12s. 0d. costs (£32 12s. 0d. in all).

#### Samples Nos. B268, A813 and A814.

The first of these represents an informal sample of farm milk taken on delivery to a Salford dairy which was found upon analysis to contain only 8·4 per cent. solids-not-fat. Two formal samples, Nos. A813 and A814, were then taken

and these gave upon analysis the following figures :—fat 3·29 per cent. and 2·55 per cent. ; solids-not-fat 8·26 per cent. and 8·25 per cent. respectively. In the case of the sample No. A813 the figures corresponded to the presence of 2·8 per cent. extraneous water and in the case of sample No. A814 to a fat deficiency of 15·0 per cent. and to the presence of 2·9 per cent. of extraneous water. The freezing points of all the samples confirmed the presence of extraneous water. Visits were then paid to the farm by the Sampling Officer and four “ Appeal to Cow ” samples obtained (see samples Nos. A815-A818) which gave the analytical results shown in the following table :—

TABLE 11.

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point (Hortvet).	Observations.
A815 .....	% 12·17	% 3·63	% 8·54	—0·541°C.	Genuine.
A816 .....	11·20	2·91	8·29	—0·521°C.	Freezing Point indicated extraneous water.
A817 .....	12·60	3·74	8·86	—0·543°C.	Genuine.
A818 .....	11·90	3·32	8·58	—0·540°C.	Genuine.

Sample No. A815 was from an evening milking and was found to be genuine. Samples Nos. A816 and A817 represented the next morning milking ; the churn from which No. A816 was taken contained 15 gallons of milk while No. A817 was from a churn which contained the remainder of the milking amounting to 2½ gallons. In view of the analytical results, particularly the freezing point, obtained on the sample No. A816, which appeared to indicate the presence of extraneous water, another visit was paid to the farm and a corresponding milking carefully supervised ; on this occasion the whole of the yield was collected in one churn and it is significant that the sample obtained, No. A818, was found upon analysis to be genuine. In view of all the circumstances it was decided to send a strong letter of caution to the farmer.

#### Samples Nos. B379 and A853.

The first of these samples represents an informal sample of farm milk taken on delivery to a Salford dairyman ; it was found upon analysis to contain only 1·8 per cent. milk fat corresponding on comparison with the presumptive limit of 3·0 per cent. milk fat of the Sale of Milk Regulations, 1939, to a fat deficiency of 40·0 per cent. Five samples from the whole of this supply were then taken ; one of these (No. A853) contained only 2·8 per cent. milk fat corresponding to a deficiency of 6·6 per cent. The other four samples were of normal butter fat content although two were naturally deficient in solids-not-fat. In view of the relatively slight deficiency in fat of the formal sample and the fact that some



of the samples were naturally poor in solids-not-fat a letter has been sent to the farmer suggesting that he takes steps to improve the quality of the milk yield of his herd.

**Sample No. B481.**

This informal sample taken on delivery to a Salford dairy company from a milk dépôt was found upon analysis to contain only 8·0 per cent. solids-not-fat corresponding to the presence of 5·9 per cent. of extraneous water. The freezing point of the sample indicated the presence of a similar quantity of extraneous water. This sample was one of eight taken from a consignment of 92 churns, the other 7 samples proved to be genuine. Four other samples, formal, were subsequently taken on delivery from the same dépôt but these also proved upon analysis to be genuine.

**Samples Nos. B761, B789 and B791.**

These three informal samples were obtained with eight other samples on delivery to a wholesale dairy from one farmer's supply. They contained respectively 2·5, 2·7 and 2·8 per cent. of milk fat, corresponding to deficiencies of 16·6 per cent., 10·0 per cent. and 6·6 per cent. The remaining eight samples were genuine, the fat contents varying from 3·0 per cent. to 4·7 per cent. This farmer has been communicated with and asked to exercise greater care in the distribution of the strippings in the bulk milk and also to make the intervals between milkings as even as possible.

**Samples Nos. B764 and B818.**

These represent two informal samples of the same farmer's supply. The first contained only 8·4 per cent. of solids-not-fat corresponding to the presence of 1·1 per cent. of extraneous water (the freezing point also indicated the presence of a small amount of extraneous water) while the other sample was found to contain 2·6 per cent. of milk fat corresponding to a deficiency of 13·3 per cent. Seven other samples of this supply were also taken, four of these had solids-not-fat below 8·5 per cent. but proved to have normal freezing points, indicating that the milk was of poor natural quality. In view of these circumstances the farmer concerned has been asked to consult his local Agricultural College with a view to improving the quality of the milk of his herd.

**Sample No. A998.**

This formal sample of bottled milk purchased from the roundsman of a dairy company was found upon analysis to contain 2·86 per cent. fat and 7·94 per cent. solids-not-fat. These figures correspond to a deficiency of 4·6 per cent. in fat content and to the presence of at least 6·6 per cent. extraneous water. The freezing point of the sample indicated the presence of at least 8·5 per cent. extraneous water. This sample was bottled from the bulked milk of a number of farms and should have been of good quality. Legal proceedings were instituted, the summons being heard before the City Stipendiary Magistrate on the 31st August, 1945, when the dairy company pleaded " guilty " and was fined £10 0s. 0d. and £3 3s. 0d. costs (£13 3s. 0d. in all).



**Samples Nos. A1123 and A1125.**

These two samples of loose milk purchased from a shop on two consecutive days by the Sampling Officer, were found upon analysis to contain 2.85 per cent. and 2.70 per cent. of milk fat respectively. On comparison with the minimum presumptive limit of 3.0 per cent. milk fat of the Sale of Milk Regulations, 1939, the figures correspond to deficiencies in fat of 5.0 per cent. and 10.0 per cent. Samples were taken on two subsequent occasions on delivery from the wholesale dairy company supplying this shop but on both occasions these samples were found to be of good quality. A letter of caution has been sent to the shopkeeper, suggesting that greater care should be taken in stirring the bulk milk.

**Samples Nos. B1394, A1160 and A1161.**

The first of these was an informal sample of farm milk taken on delivery to a Salford dairyman. It was found upon analysis to contain only 8.30 per cent. of solids-not-fat. This figure corresponds, on comparison with the minimum presumptive limits of 3.0 per cent. fat and 8.5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939, to the presence of 2.3 per cent. of extraneous water. Formal samples (Nos. A1160 and A1161) were then taken on delivery and these gave the following results upon analysis:—fat 2.90, solids-not-fat 8.20, and fat 3.50, solids-not-fat 7.92 per cent. respectively. Corresponding in the case of sample A1160 to a deficiency of 3.3 per cent. fat and the presence of 3.5 per cent. of extraneous water (the fat deficiency being due to the effect of added water) and in the case of sample No. A1161, to the presence of 6.8 per cent. of extraneous water. The freezing points of all three samples confirmed the presence of added water. Two “Appeal to Cow” samples were then taken by the Sampling Officer at the farm. These were found to be genuine and gave the following analytical results.

**TABLE 12.**

No.	Total Solids.	Fat.	Solids-not-fat.	Freezing Point (Hortvet).	Observations.
A1162 ....	% 12.19	% 3.60	% 8.59	—0.532°C.	Genuine.
A1163 ....	11.90	3.40	8.50	—0.534°C.	Genuine.

Legal proceedings were instituted in respect of the two formal samples Nos. A1160 and A1161 and the farmer was fined £3 0s. 0d. and £5 5s. 0d. costs (£8 5s. 0d. in all).

TABLE 13.

## ADULTERATION OF SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration.	Remarks.
B244 ....	Seidlitz Powder .....	Blue packet contained 14·8% excess weight.	Packers written.
B295 ....	Baking Powder .....	Deficient 80% available carbon dioxide.	See sample No. A827.
A827 ....	Baking Powder .....	Deficient 83·7% available carbon dioxide.	Prosecution and Conviction. Fined £2 2s. 0d. and £2 2s. 0d. costs.
B382 ....	Low Sugar Content Jam.	Unsatisfactory label....	See special observations.
B423 ....	Compound Syrup of Figs.	Unsatisfactory label....	See special observations.
B516 ....	Malted Food .....	Unsatisfactory label....	Label amended.
B523 ....	Fullers Earth Ointment.	Unsatisfactory label....	Old stock, present label satisfactory.
B672 ....	Camphorated Oil .....	4·5% camphor in excess of maximum B.P. limit.	Manufacturers written.
B723 ....	Blackberry Jelly.....	Deficient 0·7% soluble solids.	Manufacturers written.
B725 ....	Gelatine .....	Acidity and ash in excess of B.P. limit.	Stock surrendered.
B726 ....	Mustard .....	Deficient 42·8% allyl isothiocyanate.	See sample No. A969.
A969 ....	Mustard .....	Deficient 42·8% allyl isothiocyanate.	Stock withdrawn.
B829 ....	Starch Reduced Bread.	Unsatisfactory label....	Ministry of Food written.
B846 ....	Borax.....	2 p.p.m. arsenic in excess of the B.P. limit.	Label amended.
B853 ....	Borax.....	2 p.p.m. arsenic in excess of the B.P. limit.	Label amended.
B909 ....	Pork Sausage .....	Contained 96 p.p.m. sulphur dioxide without declaration.	Vendor cautioned.
B928 ....	Mercury Ointment....	Deficient 0·3% mercury and incorrectly labelled.	See special observations.
B1045...	Tincture of Iodine....	Contained 0·5% excess potassium iodide above the maximum B.P. limit.	No action taken.
B1047...	Marmalade .....	Deficient 56% insoluble solids.	Manufacturers cautioned.
B1229...	Mustard Compound...	Deficient 0·04% of allyl isothiocyanate.	Stock withdrawn from sale.
B1230...	Salmon and Anchovy Paste.	Deficient 16% of minimum amount meat.	Stock withdrawn from sale.
B1233...	Prawn Paste .....	Deficient 12% of minimum amount meat.	Stock withdrawn from sale.
B1278...	Biscuits.....	Deficient per ounce 1·6 mgms. iron 12·1 mgms. calcium and 0·051 mgms. vitamin B1.	Manufacturers written.
B1376...	Co. Syrup of Figs ...	Unsatisfactory label....	Label amended.

**Malted Food. Sample No. B516.**

This informal sample bore a label declaring the composition of the product, which stated that it was starch free. Upon analysis, however, the sample was found to contain 10·0 per cent. of unconverted starch. The packers were interviewed and it transpired that this matter had already been brought to their notice by the Ministry of Food as the result of a complaint from another Local Authority. New labels had already been printed omitting any reference to the words "Starch Free."

**Biscuits. Sample No. B1278.**

This informal sample of pre-packed biscuits bore a label declaring that the contents contained per ounce: Vitamin B1 0·122 mgm., iron 3·100 mgm., calcium 22·300 mgm. and phosphorous 85·000 mgm. Upon analysis, however, the following figures were obtained in this laboratory: Vitamin B1 0·071 mgm., iron 1·5 mgm., calcium 10·2 mgm. and phosphorous 84·6 mgm. It will be noted that with the exception of the phosphorous all the figures are considerably below those declared. A more recent label issued by this firm does not bear the declaration in respect of calcium and phosphorous. In view of the fact that this was a recent label issued as a result of the passing of the Labelling of Food (No. 2) Order, 1944, and in view also of the suggestion of the Food Standards and Labelling Division of the Ministry of Food contained in a circular letter dated the 13th October, 1945, that compliance with the Order should, for the present, be obtained by warning rather than by the institution of proceedings, a letter has been sent to the firm concerned drawing their attention to the results obtained and suggesting that the matter should be investigated with a view to amending the label.

**Starch Reduced Bread. Sample No. B829.**

This informal sample packed in an emergency wrapping bore no indication of the nature of the contents and no declaration of starch content or calorific value. All former packs of this particular product had declarations of composition, etc. In view of the nature of the product and its use in diabetic diet, it would appear, in my opinion, to be a retrograde step to discontinue the declaration. This matter has been brought to the notice of the Ministry of Food with the suggestion that one of the conditions for a licence to manufacture diabetic food should require the label to bear a declaration of composition, with special reference to starch or sugar content and calorific value.

**Low Sugar Content Jam. Sample No. B382.**

This informal sample bore a label stating that it was specially prepared for diabetics and that one ounce contained only 5 grams of carbohydrates. This declaration was verified by analysis and found to be correct. There were, however, several minor points with regard to the label which did not comply with the requirements of Part V of the Preserves Order, 1944. For example, there was no declaration as to whether the jam was fresh fruit or full fruit standard, the figures declaring the price were smaller than required by the Order and lastly, no licence number was given on the label. Since analysing this sample, however, a circular letter (No. FSL/3/45) has been received from the Food



Standards and Labelling Division of the Ministry of Food drawing attention to the fact that certain diabetic jams and marmalades, manufactured under licence, do not comply with the prescribed standards of the Food Standards (Preserves) Order, 1944, and intimating that consideration is being given to specifically exempting these products from the provisions of the Standards Order. A letter has been sent to the Division of the Ministry of Food concerned drawing attention to the label in question and suggesting that details of the precise labelling requirements in regard to these special products should be included in any new exemption order.

**Marmalade. Sample No. B1047.**

This informal sample was found upon analysis to contain 72·6 per cent. of soluble solids but only 0·35 per cent. of insoluble solids. The Food Standards (Preserves) Order, 1944, requires marmalade to contain 68·5 per cent. of soluble solids and 20 per cent. of fruit. The latter would correspond to an insoluble solids content of approximately 0·8 per cent. Comparison with this figure indicates a deficiency in insoluble solids of approximately 56 per cent. The makers of this marmalade were interviewed and two samples taken from their stock ; these gave insoluble figures of 0·5 per cent. and 0·7 per cent. respectively. The results indicated that not only was there uneven mixing of insoluble solids in the jars but also that the marmalade was deficient in fruit. A letter of caution was sent to the firm concerned.

**Blackberry Jelly. Sample No. B723.**

This informal sample was found upon analysis to contain 67·8 per cent. of soluble solids. The Food Standards (Preserves) Order, 1944, requires a minimum of 68·5 per cent. of soluble solids in jam and fruit jelly. This sample was, therefore, deficient of 0·7 per cent. of the minimum amount of soluble solids. The manufacturers have been communicated with and steps have been taken to prevent any repetition of this offence.

**Mustard. Samples Nos. B726 and A969.**

These represent informal and formal samples respectively of the same brand of pre-packed mustard which were both found upon analysis to yield only 0·20 per cent. of allyl isothiocyanate (volatile oil). The Food Standards (Mustard) (No. 2) Order, 1944, requires mustard to yield at least 0·35 per cent. of allyl isothiocyanate, comparison with this standard indicated a deficiency of 42·8 per cent. This particular delivery was made in March, 1944, and another sample (No. B768) taken from a more recent delivery to another shop was found to be genuine. The packers were communicated with and they have replaced the stock corresponding to samples Nos. B726 and A969 with mustard complying with the Order.

**Mustard Compound. Sample No. B1229.**

This informal sample was found upon analysis to yield only 0·31 per cent. of allyl isothiocyanate, the volatile oil yielded by brown mustard, from which table mustard derives its distinctive flavour. The Food Standards (Mustard) (No. 2) Order, 1944, requires mustard compound to contain a minimum of

0.35 per cent. allyl isothiocyanate; the sample in question, therefore, being deficient to the extent of 0.04 per cent. This particular commodity had been in stock since May, 1944, and the manager of the shop was communicated with and he agreed to withdraw it from sale.

**Pork Sausage. Sample No. B909.**

This informal sample was found to contain 96 parts per million of sulphite preservative expressed as sulphur dioxide. Sausage is permitted under the Public Health (Preservatives, etc., in Food) Regulations to contain 450 parts per million of sulphite preservative with the proviso that its presence should be declared to the intending purchaser. The Sampling Officer has drawn the attention of the vendor to the declaration required by the Regulations.

**Fish Paste. Sample Nos. B1230 and B1233.**

These two informal samples of two different brands of fish paste were found upon analysis to contain 49 per cent. and 53 per cent. of fish respectively. The Meat Products, Canned Soup and Canned Meat (Control and Maximum Prices) Order, 1944, requires fish paste to contain 70 per cent. of meat (limits 65-75 per cent.). The previous order, dated 7th June, 1941, prescribed a meat content of 40 to 60 per cent. for fish paste. Manufacturers were permitted to make fish paste to the latter specifications up to the 30th July, 1944. From enquiries made by the Sampling Officer there is little doubt that both samples had been manufactured under the 1941 Order. In view, however, of the fact that both commodities had been in stock over eighteen months and the fact that they were slow selling lines, the shopkeeper decided to withdraw them from sale.

**Baking Powder, Samples Nos. B295 and A827.**

These were informal and formal samples respectively of the same brand of baking powder which were found upon analysis to contain only 1.6 per cent. and 1.3 per cent. of available carbon dioxide and 0.05 per cent. and 0.2 per cent. of residual carbon dioxide respectively. The Food Standards (Baking Powder and Golden Raising Powder) Order, 1944, requires baking powder to contain not less than 8 per cent. of available carbon dioxide and not more than 1.5 per cent. of residual carbon dioxide. On comparison with this standard the samples under discussion were deficient of available carbon dioxide to the extent of 80 per cent. and 83.7 per cent. respectively. The analysis of the samples indicated that the deficiency was due to decomposition on storage. The Order quoted above was made under Regulation 2 of the Defence (Sale of Food) Regulations 1943, and enforcement is in the hands of the Food and Drugs Authority or the Ministry of Food. Legal proceedings were instituted by this authority in respect of sample No. A827 and at the hearing the defendant company pleaded guilty and was fined £2 2s. 0d. and £2 2s. 0d. costs. (£4 4s. 0d. in all).

**Tincture of Iodine—Sample No. B1045.**

This informal sample was found upon analysis to contain 2.46 per cent. w/v of iodine and 1.60 per cent. w/v potassium iodide. The British Pharmacopœia limits are iodine 2.45 to 2.55 per cent., potassium iodide 1.45 to 1.55



per cent. The sample under consideration therefore, contained 0·05 per cent. of potassium iodide in excess of the maximum B.P. limit. In view of the relatively slight divergence from the limit and the fact that it was an excess and not a deficiency, no action was taken with regard to this sample.

**Gelatine—Sample No. B725.**

This informal sample was found to have an ash content of 2·7 per cent. and an acidity (B.P. test) equivalent to 8·5 mls. of N/10 NaOH. The British Pharmacopœia requires gelatine to contain not more than 2·0 per cent. of ash and to have an acidity (on a 2 grms. sample) equivalent to not more than 5 mls. of N/10 NaOH. Enquiry by the Sampling Officer showed that this gelatine was very old stock and its source of supply to the retailer could not be traced. The remainder of the stock (1 lb. 4 oz.) was surrendered.

**Seidlitz Powder—Sample No. B244.**

This informal sample consisted of three seidlitz powders. The contents of the white packets were the correct weight but the contents of the three blue packets weighed 11·48, 11·10 and 11·88 grams respectively. The British Pharmacopœia requires the contents of the blue packet to weigh 10 grams; on comparison with this standard the packets in question contained an average excess weight of 14·8 per cent. The packers have been communicated with and they have taken steps to ensure that, in future, the correct weight will be dispensed.

**Borax—Samples Nos. B846 and B853.**

These informal samples packed by different firms were both found to contain 7·0 parts per million of arsenic which is 2 parts per million in excess of the British Pharmacopœia limit. In the case of sample No. B846 the label indicated laundry and domestic uses; while in the case of sample No. B853 the contents of the packet were clearly labelled "Borax (domestic)." In view, however, of the possibility of a purchaser assuming that this borax was of medicinal quality both packers have been communicated with and they have added a statement to the label to the effect that the contents of the packets are not intended for use for medicinal purposes.

**Fuller's Earth Ointment. Sample No. B523.**

This sample was found upon analysis to contain 9·2 per cent. fullers earth and 3·9 per cent. zinc oxide in an ointment base containing paraffins and lanolin. No declaration of the formula was printed on the label as required for recommended medicines by Section XI of the Pharmacy and Medicines Act, 1941. When, however, the packers' attention was drawn to this matter it was found that this was old stock and that the present pack bore a declaration of formula.

**Camphorated Oil—Sample No. B672.**

This informal sample of camphorated oil was found upon analysis to contain 25·5 per cent. of camphor. The British Pharmacopœia lays down limits of from 19 per cent. to 21 per cent. of camphor in this commodity. Comparison with the standard showed that the sample in question contained 4·5 per cent. of



camphor in excess of the maximum limit. The manufacturers of this product have been communicated with and asked to take the necessary steps to ensure that, in future, it will comply strictly with the requirements of the British Pharmacopœia.

**Mercury Ointment—Sample No. B928.**

This informal sample was found upon analysis to contain 28·7 per cent. of mercury which is 0·3 per cent. below the minimum limit for "Ointment of Mercury" of the British Pharmacopœia. The 4th Addendum to the British Pharmacopœia states, however, that where "Mercury Ointment," "Mercurial Ointment" or "Blue Ointment" is demanded "dilute ointment of mercury" shall be supplied. The dilute ointment of the B.P. contains only 10 per cent. mercury. The attention of the vendor has been directed to this addition to the British Pharmacopœia.

**Compound Syrup of Figs—Sample No. B423.**

This informal sample pre-packed, bore a statement of dosage but no declaration of composition was given on the label. Section 11 of the Pharmacy and Medicines Act, 1941, requires that in the case of all substances "recommended as a medicine" there shall be given on the label the appropriate quantitative particulars of the ingredients. It is felt that a statement of dosage, particularly in the case of an obvious medicinal preparation of this nature, is an indirect recommendation for its use. In order to obtain full advantage of the labelling requirements of the above section of the Pharmacy and Medicines Act, it is, in my opinion, essential that the recommendation clause should be interpreted in its broadest sense, otherwise this and certain other similarly labelled unofficial medicinal preparations will be outside the scope of the Act.

**Compound Syrup of Figs. Sample No. B1376.**

This informal sample of pre-packed Syrup of Figs bore the following formula: Senna Fol. 17·5 per cent., Senna Fruct 12·50 per cent., Fic. 2·5 per cent., Sucrose 72·5 per cent., Ol. Menth. Pip. 0·05 per cent., Ol. Anisi 0·08 per cent., Alcohol (90 per cent.) 0·35 per cent., Chloroform 0·41 per cent., Aqua ad 100 per cent.

It will be observed that although the amounts of the ingredients are expressed as percentages, their sum adds up to 105·89 without the addition of any water.

The packer has been interviewed and it was ascertained that the sample was part of an old stock which had been reported upon in 1943. This product is now compounded to a revised formula and the packer has given an undertaking that all old labels will be destroyed.

**BOROUGH OF ECCLES.**

During the year 126 samples were received from the above Borough for examination under the Food and Drugs Act, 1938.

Seven samples were found to be adulterated and legal proceedings were instituted in two cases. The fines (including costs) inflicted in these cases amounted to £5 4s. 0d.

Details of the samples are given in the following table :—

TABLE 14.  
SAMPLES EXAMINED.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk .....	81	...	6	7·4
Butter .....	2	...	...	...
Margarine .....	2	...	...	...
Lard .....	2	...	...	...
Sugar.....	2	...	...	...
Tea.....	2	...	...	...
Coffee.....	2	...	...	...
Jam .....	2	...	...	...
Marmalade .....	2	...	1	50·0
Mincemeat.....	2	...	...	...
Oatmeal .....	2	...	...	...
Self-raising Flour.....	2	...	...	...
Soya Flour.....	2	...	...	...
Baking Powder .....	2	...	...	...
Custard Powder .....	2	...	...	...
Mustard Compound .....	1	...	...	...
Ground Ginger .....	2	...	...	...
Mixed Spice.....	2	...	...	...
Malt Vinegar .....	2	...	...	...
Castor Oil.....	2	...	...	...
Seidlitz Powder.....	2	...	...	...
Epsom Salts.....	2	...	...	...
Boracic Ointment .....	2	...	...	...
Sulphur Ointment .....	2	...	...	...
	126	...	7	5·5

TABLE 15.  
AVERAGE COMPOSITION OF ALL MILK.

Month.	Number of Samples	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	5	11·70 { 11·90 12·12 11·38	3·34 { 3·31 3·58 3·22	8·36 { 8·59 8·54 8·16
February .....	6			
March.....	11			
April .....	5	12·06 { 11·96 12·05 12·21	3·45 { 3·46 3·35 3·62	8·61 { 8·50 8·70 8·59
May .....	8			
June .....	4			
July .....	3	12·25 { 12·06 12·25 12·30	3·64 { 3·43 3·63 3·70	8·61 { 8·63 8·62 8·60
August .....	6			
September.....	12			
October.....	3	12·36 { 12·56 12·38 12·25	3·70 { 3·90 3·71 3·61	8·66 { 8·65 8·67 8·64
November.....	10			
December .....	8			
	81	12·09	3·53	8·56

TABLE 16.

MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
738 .....	Deficient 1·6% milk fat.....	See special observations .....	Bottled milk.
739 .....	Deficient 8·3% milk fat.....		
761 .....	Deficient 30·0% milk fat and contained 33·2% extraneous water F.Pt. Hortvet —0·340.	Prosecution and conviction .....	Fined £5.
762 .....	Contained 3·3% extraneous water F.Pt. Hortvet —0·522.	Dairy company cautioned.....	Bottled Milk.
766 .....	Contained 9·7% extraneous water F.Pt. Hortvet —0·480.	Prosecution .....	Dismissal. Probation of Offenders Act.
840 .....	Contained 1·2% extraneous water F.Pt. Hortvet —0·528.	Caution.....	Further samples genuine.



TABLE 17.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration.	Remarks.
848 .....	Marmalade .....	Deficient 0·6% soluble solids.	Manufacturers written.

The figure of 7·4 per cent. for milk adulteration is about the average for England and Wales for the years for which the figures are available (see Table 4).

In the following table will be found particulars of the various types of milk adulteration and the number of samples under each heading :—

Milks deficient in fat only .....	2 or 2·5%
Milks containing added water only .....	3 or 3·7%
Milks deficient in fat and containing added water .....	1 or 1·2%
	6 or 7·4%
Milks containing more than 3% added water .....	3 or 3·7%
Milks 10% or more deficient in fat.....	1 or 1·2%

In the following paragraphs will be found details of the more interesting adulterated samples.

Milk. Samples Nos. 738 and 739.

The first of these informal samples of bottled milk from a large dairy company was found upon analysis to contain only 2·95 per cent. of milk fat which corresponds to a slight deficiency (1·6 per cent.). The manager of the dairy company concerned stated that the milk in question was delivered to the dairy by tanker and that it was extremely difficult to adequately mix this milk before sending it through the pasteurising and bottling plant. Three informal samples (Nos. 739-741) were taken from a subsequent tanker delivery at different stages during the emptying of the tanker and the fat contents of these were found to be 2·75, 3·60 and 3·65 per cent. respectively. Sample No. 739, which represents the first portion of milk drawn off a full tanker, was, therefore, also deficient in fat. In order to prevent fat deficient samples being obtained in future the milk from tankers is now circulated through the pump and back to the tanker for some minutes before it is allowed to enter the plant.

**Milk. Samples Nos. 761 and 766.**

The first of these formal samples was obtained from a retail dairyman in the course of his round. When stopped by the Sampling Officer, the dairyman stated that he had sold all his milk but on examination of the milk churns one was found to contain at least three gallons of milk. A sample of this milk, No. 761, was found upon analysis to contain 2·1 per cent. fat and 5·68 per cent. solids-not-fat. These figures correspond on comparison with the minimum presumptive limit of 3 per cent. fat and 8·5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939, to a deficiency in fat of 30·0 per cent. and to the presence of 33·2 per cent. of extraneous water. The freezing point of the sample indicated the presence of 35·8 per cent. extraneous water. The fat deficiency was entirely due to the presence of extraneous water. The next day two samples were taken from two churns on delivery from the dairy company supplying the retailer ; these were found to have the following composition :—

No.	Total Solids. %	Fat. %	Solids-not-fat. %	Freezing Point (Hortvet).
766.....	10·67	3·00	7·67	—0·480°C.
767.....	11·85	3·34	8·51	—0·540°C.

The figures for sample No. 766 correspond to the presence of 9·7 per cent. of extraneous water, but sample No. 767 was genuine. In view of the circumstances mentioned above, legal proceedings were instituted against the retailer in respect of sample No. 761 and against the dairy company in respect of sample No. 766. At the hearing at the Eccles Police Court on the 15th May, 1945, the retailer was fined £5 0s. 0d., but the case against the dairy company was dismissed under the Probation of Offenders Act on payment of 4s., the cost of the summons. (Total fines and costs £5 4s. 0d.).

**BOROUGH OF STRETFORD.**

During the year 179 samples were received from the above Borough for examination under the Food and Drugs Act, 1938. Sixteen samples were found to be adulterated. Many of the offences, particularly with regard to milk samples were, however, relatively slight but legal proceedings were instituted in three cases (one under the Pharmacy and Medicines Act, 1941). The fines (including costs) inflicted in these cases amounted to £43 16s. 0d.

Details of the samples are given in the following tables :—

**TABLE 18.**  
SAMPLES EXAMINED.

SAMPLES.	Number Examined.	Number Adulterated.		Per cent. Adulteration.
		Preservatives Only.	Other Ways.	
Milk .....	116	...	12	10·3
Coffee.....	2	...	...	...
Arrowroot.....	2	...	...	...
Cake Mixture (Ginger) .....	2	...	...	...
Sponge Pudding Mixture Ginger .....	1	...	...	...
Chocolate Cake Mixture ....	1	...	1	100·0
Chocolate Malt Spread .....	1	...	...	...
Chocolate Cup.....	1	...	...	...
Pork Sausage .....	1	...	...	...
Pork Sausage Meat.....	1	...	...	...
Soup Powder .....	3	...	...	...
Mustard Sauce.....	1	...	...	...
Mustard Pickles .....	1	...	...	...
Gravy Browning.....	2	...	...	...
Baking Powder .....	2	...	...	...
Sage and Onion Stuffing ...	2	...	...	...
Gelatine.....	2	...	...	...
Raspberry Vinegar and Nut Oil.....	2	...	...	...
Syrup with Halibut Oil.....	1	...	...	...
Vitamin A and D Oil in Orange Juice Syrup .....	1	...	...	...
Standard Saccharin Tablets	2	...	...	...
Flavouring Essence .....	2	...	...	...
Cod Liver Oil Emulsion.....	1	...	...	...
Parrish's Chemical Food.....	2	...	...	...
Tincture of Iodine.....	2	...	1	50·0
Iodised Throat Tablets .....	3	...	...	...
Cream of Tartar.....	2	...	...	...
Liquorice Powder .....	2	...	1	50·0
Glycerine .....	2	...	...	...
Castor Oil.....	2	...	...	...
Seidlitz Powders.....	2	...	...	...
Health Salts.....	2	...	...	...
Morning Salt Tablets.....	1	...	...	...
Chocolate Laxative.....	2	...	...	...
Stomach Powder.....	1	...	...	...
Stomach Tablets.....	1	...	...	...
Gripe Mixture .....	2	...	...	...
Glycerine, Lemon and Ipecac Mixture .....	1	...	...	...
Lemon, Ipecac and Squill Compound .....	1	...	...	...
Chest and Lung Syrup .....	1	...	1	100·0
	179	...	16	8·9



TABLE 19.

AVERAGE COMPOSITION OF ALL MILKS.

Month.	Number of Samples.	Total Solids per cent.	Fat per cent.	Solids-not-fat per cent.
January.....	7	12·04 { 12·10 12·01 12·06	3·52 { 3·57 3·48 3·58	8·52 { 8·53 8·53 8·48
February .....	16			
March.....	6			
April .....	22	12·07 { 12·01 12·40 12·07	3·50 { 3·48 3·68 3·45	8·57 { 8·53 8·72 8·62
May .....	4			
June .....	6			
July .....	14	12·19 { 12·12 12·21 12·36	3·59 { 3·49 3·62 3·79	8·60 { 8·63 8·59 8·57
August .....	9			
September.....	5			
October .....	11	12·36 { 12·52 12·31 12·19	3·70 { 3·80 3·74 3·49	8·66 { 8·72 8·57 8·70
November.....	9			
December .....	7			
	116	12·16	3·57	8·59

TABLE 20.

## MILK ADULTERATION.

No.	Nature of Adulteration.	Action Taken.	Remarks.
976.....	2.2% extraneous water F.Pt. Hortvet —0.523° C.	See samples Nos. 993, 994 and 995.	Purchased from retailer.
992.....	2.3% extraneous water F.Pt. Hortvet —0.525° C.	Dairy company cautioned.....	Sterilised milk.
993.....	2.0% extraneous water F.Pt. Hortvet —0.526° C.	Dairy company cautioned.....	Taken on delivery to retailer of No. 976.
994.....	2.1% extraneous water F.Pt. Hortvet —0.528° C.		
995.....	1.6% extraneous water F.Pt. Hortvet —0.526° C.		
1023.....	4.5% extraneous water F.Pt. Hortvet —0.501° C....	Prosecution and conviction.....	Fined £5 and £2 2s. 0d. costs.
1025.....	2.1% extraneous water F.Pt. Hortvet —0.525° C....	Dairy company cautioned.....	Bottled sterilised milk.
1034.....	3.7% extraneous water F.Pt. Hortvet —0.520° C....	Dairy company cautioned.....	Bottled milk.
1061.....	3.5% extraneous water F.Pt. Hortvet —0.494° C....	Prosecution .....	Dismissed under Probation of Offenders Act.
5.....	2.8% extraneous water F.Pt. Hortvet —0.522° C....	Dairyman cautioned .....	Further samples genuine.
29.....	2.3% extraneous water F.Pt. Hortvet —0.518° C.	Caution.....	
30.....	2.3% extraneous water F.Pt. Hortvet —0.518° C.		

TABLE 21.

ADULTERATED SAMPLES OTHER THAN MILK.

No.	Description.	Nature of Adulteration.	Remarks.
1021.....	Chest and Lung Syrup.	Unsatisfactory label....	No action, see special observations.
1049.....	Chocolate Cake Mixture.	Deficient 62·5% dry fat-free cocoa.	Manufacturer and Ministry of Food written.
1090.....	Tincture of Iodine....	Contained 0·13% iodine and 0·03% potassium iodide above the maximum B.P. limit.	Pharmacist notified, see special observations.
37.....	Liquorice Powder ....	Infested with mould....	Shop inspected. No further stock.

In the following table will be found particulars of the various types of milk adulteration and the number of samples under each heading :—

Milks deficient in fat only .....	Nil.
Milks containing added water only .....	12 or 10·3%
Milks deficient in fat and containing added water.....	Nil.
<hr/>	
	12 or 10·3%
<hr/>	
Milks containing more than 3% added water .....,....	3 or 2·6%
Milks 10% or more deficient in fat.....	Nil.

In the following paragraphs will be found details of the more interesting adulterated samples.

Milk. Sample No. 1023.

This formal sample was obtained on delivery from a large dairy company to a workmen’s canteen and was found upon analysis to contain only 8·12 per cent. of solids-not-fat. This figure corresponds on comparison with the presumptive limit of 8·5 per cent. solids-not-fat of the Sale of Milk Regulations, 1939, to the presence of at least 4·5 per cent. of extraneous water. The freezing point of the sample indicated the presence of at least 5·5 per cent. extraneous water. Legal proceedings were instituted in respect of this sample and the dairy company concerned laid further information against their roundsman under Section 83 of the Act, alleging that he was responsible for the offence. At the hearing the roundsman admitted watering the milk and was fined £5 0s. 0d. and £2 2s. 0d. costs (£7 2s. 0d.) in all. The summons against the dairy company was dismissed.

Milk. Sample No. 1061.

This formal sample was taken on delivery to a school from a dairy company. Upon analysis it was found to contain 8·20 per cent. of solids-not-fat corresponding to the presence of at least 3·5 per cent. extraneous water. The freezing point



of the sample indicated the presence of at least 6·8 per cent. extraneous water. Legal proceedings were authorised in respect of this sample and at the hearing the retail dairyman entered a plea of "guilty," but in view of his previous good record the summons was dismissed under the Probation of Offenders Act on payment of 4s. costs.

#### **Chocolate Cake Mixture. Sample No. 1049.**

This informal sample was found upon analysis to contain 0·095 per cent. of cocoa alkaloids, equivalent to the presence of 3·0 per cent. of dry fat-free cocoa. The minimum amount of dry fat-free cocoa which will give a satisfactory flavour and colour of chocolate is 4·0 per cent. in the finished cake. In the case of the sample under consideration the recipe printed on the label required the contents of the bag to be mixed with an equal weight of other ingredients so that the dry fat-free cocoa content of the sample would require to be at least 8·0 per cent. in order that the finished cake could comply with the standard suggested above. On this basis the sample was deficient in dry fat-free cocoa to the extent of at least 62·5 per cent. Both the Ministry of Food and the manufacturers were communicated with, and as a result of the view expressed by this and other Food and Drug authorities and by manufacturers, the Ministry of Food has decided to license only mixtures containing 10 per cent. of cocoa, an amount designed to give 4 per cent. fat-free cocoa in the finished product.

#### **Tincture of Iodine. Sample No. 1090.**

This informal sample obtained from the stock bottle in a Pharmacist's shop was found upon analysis to contain 2·68 per cent. w/v of iodine and 1·58 per cent. w/v of potassium iodide. The figures corresponded on comparison with the British Pharmacopœia limits of 2·45-2·55 per cent. w/v of iodine and 1·45-1·55 w/v of potassium iodide, to an excess of 0·13 per cent. of iodine and an excess of 0·03 per cent. of potassium iodide. The Pharmacist concerned was interviewed by the Sampling Officer and it transpired that the origin of this sample could not be traced and that the vendor was in the habit of filling up his stock bottle with fresh material before the previous quantity was completely used up.

#### **Liquorice Powder. Sample No. 37.**

This informal sample consisted of three packets, the contents of which were found to be caked into a solid mass and infested with mould. The Sampling Officer visited the shop and ascertained that the three packets were from very old stock and that no further packets remained in the shop.

#### **Chest and Lung Syrup. Sample No. 1021.**

This sample was packed and labelled by the same firm who packed the "All Fours" Cough Mixture, No. 833, reported upon last year, and of which a further sample has been submitted under the Pharmacy and Medicines Act, 1941 (see later in this report). The formula given with this sample also included

the ingredients described as "Ess. Camph. Co." but in view of the fact that the Pharmaceutical Society was considering taking action with regard to the "All Fours" Cough Mixture, it was decided to take no action at present, with regard to sample No. 1021.

#### **"All Fours" Cough Mixture. Sample No. M63.**

This sample was submitted for examination at the request of the Pharmaceutical Society. The formula declared on the bottle included an ingredient described as "Ess. Camph. Co." This is a non-official preparation and is not, therefore, in my opinion, descriptive of the true nature and quantitative particulars of the items present in it as required by Section 11 of the Pharmacy and Medicines Act, 1941. Where a non-official preparation is used as an ingredient in a recommended medicine it would appear essential, in view of the fact that there are no standards for such preparations, to specify each item present in the preparation and also the quantity present. In the case of this particular ingredient there is also the possibility of the name being confused with the abbreviation "Tinct. Camph. Co." used for Paregoric, which contains opium and which is an official preparation of the British Pharmacopœia (see also observations with regard to the informal Food and Drugs Act sample, No. 933, submitted last year). The Pharmaceutical Society decided to institute proceedings in respect of sample No. M63, and summonses were issued against the retailer and against the packer for counselling and procuring the sale. The summonses were heard at the Manchester County Police Court on the 30th May, 1945, and after a full hearing the Bench found for the prosecution in both cases. The retailer was ordered to pay a nominal fine of 5s., but the packer was fined £10 with 25 guineas costs (£36 10s. 0d. in all).

#### **RAG FLOCK ACTS, 1911 and 1928.**

During the year one sample of rag flock was submitted by the Borough of Stretford. This was found to contain 24·3 parts of chlorine in 100,000 parts of the flock; it complied, therefore, with the standard of cleanliness of 30 parts of chlorine in 100,000 parts of flock laid down in Article 1 of the Rag Flock Regulations, 1912.

#### **MISCELLANEOUS SAMPLES.**

Contract Samples .....	66
Miscellaneous Health Department.....	22
Waters.....	46
Swimming Bath Waters .....	84
Own Information .....	9
Soot Gauges .....	48
Sulphur Dioxide Candles.....	24
Samples submitted by other Boroughs.....	5
	—
	304
	—

## CONTRACT SAMPLES.

Bread .....	25
Lysol .....	7
Sweeping Compounds .....	3
Scouring Tablets .....	2
Scouring Powders .....	7
Turpentine Substitute .....	2
Floor Polish .....	4
Furniture Cream .....	5
Metal Polish Liquid.....	3
Metal Paste.....	3
Baby Powder.....	1
Cocoa .....	4
	—
	66
	—

Sixty-six samples were examined in connection with commodities purchased by the Central Purchasing Committee. The chief consumers of the items examined are the Health Department and the various City Institutions, and the samples included control samples taken from deliveries as well as samples submitted with the various tenders, the latter being examined primarily to ascertain whether they were in accordance with the relevant specifications.

**SWIMMING BATH WATERS.**

The use of swimming baths has increased greatly in recent years. In order that available facilities should be used to the best advantage, the Ministry of Health, in 1929, published a report on the "Purification of the Water of Swimming Baths." This report contains practical suggestions for the guidance of Local Authorities, which may be summarised as follows :—

For indoor baths, it is recommended that filtration should be continuous by pressure filters, with a "turn-over" period for the whole of the water in the baths not more than four hours. In order that rapid filtration should be effective, it is necessary to add a "coagulant," that is, an aluminium compound with the necessary alkaline salt to form a flocculent and retentive precipitate of aluminium hydrate which prevents solid particles and some of the bacteria from passing through the filters. After filtration, the clear liquid is heated, aerated and chlorinated by means of chlorine gas or chloramine. The water then entering the bath should comply with the following chemical guarantees :—

1. The water issuing from the plant shall contain not more than 0·5 parts and not less than 0·2 parts per million of free chlorine.
2. Be definitely alkaline to methyl orange, but free from caustic alkalinity.
3. Be of a clarity so that a 19 S.W.G. platinum wire can be seen through a depth of six feet.
4. Fully aerated, sparkling and attractive in appearance.



Provided that the bath is not hopelessly overcrowded, the bacterial purity will then be approximately the same as that of drinking water. It is pointed out that the maintenance of an alkaline condition is important to neutralise the acid continually formed from the alumina and chlorine, which sometimes causes complaints of smarting eyes, often wrongly attributed to the presence of excess chlorine. A pH value between 7·0 to 8·0 will be adequate protection in this respect.

Eighty-four samples of swimming bath water were examined during the year. This figure is considerably below that of pre-war years, due to the closing of Regent Road and Pendleton Baths and the partial closing of Seedley Baths following the establishment of First Aid Posts in these buildings. The baths in use were tested once a week during the summer period extending from the beginning of May to the end of September, and once a month during the remainder of the year. Out of the total number of samples examined, 22 showed slight variations from the standards of free chlorine and alkalinity indicated above. One sample was entirely devoid of free chlorine and 10 samples showed a free chlorine content exceeding one part per million. The divergencies in the last eleven cases were brought to the notice of the Baths Superintendent. On no occasion was the divergency found sufficient to cause noticeable inconvenience to the bathers.

DRINKING WATERS.

Forty-six samples of water were examined during the year, including the usual monthly analysis of the public water supply.

Salford obtains its water supply from gathering grounds under the control of Manchester Corporation. Samples have been taken for analysis each month at two points in this City, one from a tap in Regent Road, and the other from a tap in Hope Hospital, Pendleton. The average results for the year are given in the following table, and it will be seen that the water in both districts possesses very little hardness and is of satisfactory chemical purity. Free chlorine was detected in the samples taken at Regent Road on twelve occasions during the year and on eight occasions at Hope Hospital.

TABLE 22.

	PARTS PER 100,000.	
	Hope Hospital, Pendleton.	Regent Road, Salford.
Total Solid Matter .....	3·87	10·27
Nitrates (as N <sub>2</sub> ) .....	Trace	0·06
Nitrites (as N <sub>2</sub> ).....	Trace	Nil
Combined Chlorine .....	0·76	1·23
Free Chlorine .....	Trace	0·013
Free and Saline Ammonia (as N <sub>2</sub> ).....	0·002	0·004
Albuminoid Ammonia (as N <sub>2</sub> ) .....	0·0015	0·003
Oxygen absorbed from acid { 15 mins....	0·0320	0·037
permanganate { 3 hours...	0·0630	0·077
Temporary Hardness.....	1·3	1·9
Total Hardness.....	2·2	5·1
pH Value.....	7·1	7·1

## OTHER DETERMINATIONS.

*Plumbo-solvency.* The amount of lead found in the first litre drawn after the water had stood over-night in lead service pipes was, in the case of the Pendleton supply, 0.07 parts per million (pH 7.3) and in the case of the Salford supply 0.17 parts per million (pH 7.0).

*Fluorine.* Both the Pendleton and Salford supplies contained only negligible amounts of fluorine, amounting, if present at all, to less than 0.1 parts per million.

**FERTILISERS AND FEEDING STUFFS ACT, 1926.**

Eight samples have been examined during the year, consisting of four samples of feeding stuffs and four samples of fertilisers. One sample of feeding stuff and two of the fertilisers satisfied the requirements of the Act. Five samples showed variations from the declared statutory statements in respect of certain analytical figures in excess of the limits laid down in the Fertilisers and Feeding Stuffs Regulations, 1932. In all cases where variations were found, the results were brought to the notice of the manufacturers concerned with a view to the amendment of the statutory statements. In no case was the presence of any injurious substance detected.

Appended is a list of the unsatisfactory samples, together with the variations found :—

B 590 Bone Meal.....	Nitrogen, found 1.7 per cent., declared 0.82 per cent. ; total phosphoric acid ( $P_2O_5$ ), found 30.3 per cent. ; declared insoluble phosphates ( $P_2O_5$ ), 27.5 per cent.
B 592 Muriate of Potash.....	Potash ( $K_2O$ ), found 60.8 per cent. ; declared 50.4 per cent.
B1182 Poultry Balancer Meal.....	Fibre, found 6.5 per cent. ; declared 8.0 per cent.
B1183 Treacle Meal .....	Fibre, found 6.0 per cent. ; declared 8.0 per cent.
B1185 National Baby Chick Food	Oil, found 4.6 per cent. ; declared 4.0 per cent.

**PHARMACY AND POISONS ACT, 1933.**

Five samples have been examined during the year. These consisted of three samples of solution of ammonia and two samples of phenol disinfectant. Details of these samples are given below :—

One sample of ammonia was found to contain less than 5 per cent. w/w of ammonia and was, therefore, exempt from the regulations. Another sample (No. B565) declared to contain less than 5 per cent. w/w ammonia was found actually to contain 6.2 per cent. w/w ammonia and, therefore, came within the regulations. The packers of this sample were communicated with and

informed of the analytical results. The last sample (No. B572) was sold by a Listed Seller of Part II Poisons, and the label bore the following declaration "contains commercial strong ammonia. (16.5 per cent. w in w). .937 S.G." This declaration was somewhat ambiguous in that analysis indicated that the 16.5 per cent. referred to ammonia as  $\text{NH}_3$  and not to commercial strong ammonia. In this case also, the packers were communicated with and requested to amend their declaration.

**Phenol Disinfectant. Sample No. B1052.**

This informal sample bore a label declaring the contents to contain 18 per cent. v/v of phenols. Upon analysis, however, it was found to contain only 12.4 per cent., a figure which corresponds to a deficiency of 31 per cent. The packers were informed of the analytical results obtained and asked to take steps to ensure that their product would, in future, comply strictly with the declaration.

**Phenol Disinfectant. Sample No. B1056.**

This informal sample bore a label declaring the presence of 15-20 per cent. cresols w/w. Upon analysis, however, only 12.6 per cent. was found, corresponding to a deficiency of at least 16.0 per cent. Both the packers and the wholesale suppliers were interviewed and steps were taken to improve the cresol content of this commodity.



## ATMOSPHERIC POLLUTION.

### Sulphur Pollution.

Two hundred and fifty-six tests have been carried out throughout the year at Regent Road by the volumetric sulphur method and twenty-four monthly tests at both Regent Road and Ladywell Sanatorium by the lead peroxide method. In the former process, the sulphur dioxide present in the air is returned as parts per million, while by the latter method, atmospheric sulphur pollution is returned as milligrammes of sulphur trioxide per 100 square centimetres of exposed surface. Both processes show a very striking rise in the winter months, and the volumetric process, by which daily determinations are made, shows exceptionally high figures on foggy days, thus demonstrating the tenacity with which smoke pollution hangs over the City during these periods.

TABLE 23.

### SULPHUR POLLUTION.

Month.	Milligrammes Sulphur Trioxide per 100 sq. cm. Daily Average.		Parts Sulphur Dioxide per million of air. Daily Average. Regent Road.
	Regent Road.	Ladywell Hospital.	
January .....	5.01	4.76	0.166
February .....	3.82	3.39	0.029
March .....	3.04	4.15	0.123
April .....	1.97	1.70	0.124
May .....	1.74	1.81	0.068
June .....	1.73	1.62	0.071
July .....	1.59	1.33	0.042
August .....	1.55	1.56	0.049
September .....	2.16	2.28	0.066
October .....	2.88	3.28	0.103
November .....	3.23	2.67	0.051
December .....	3.07	3.52	0.034

### Examination of Soot Gauge Deposits.

The work of examining the deposits in the special gauges placed at various points in the City has been continued. Standard gauges are situated at Broughton Senior School, Salford ; Ladywell Hospital ; Drinkwater Park ; and at the Corporation Sanatorium at Marple, Cheshire.

In uniformity with the results expressed by other stations, of which there are a number scattered throughout Great Britain, the results are expressed in metric tons per square kilometre. The metric ton is equivalent to slightly more than the English ton, whilst there are 2.59 square kilometres to the square mile, so that to convert metric tons per square kilometre to English tons per square mile, it is necessary to multiply by 2.55, or roughly 2½.

Table 24 shows the average monthly results that have been obtained during the year. It will be observed that the deposits collected at Broughton Senior School, Ladywell Hospital and Drinkwater Park are very similar in amount and indicate a considerable amount of atmospheric pollution, whilst, as is to be expected, the deposit collected at Marple shows that the air there is, comparatively speaking, “ pure.”

TABLE 24.

SOOT GAUGE OBSERVATIONS.

Monthly Averages—Metric Tons per Square Kilometre.

	Salford : Broughton Senior School.	Salford : Ladywell Hospital.	Salford : Drinkwater Park.	Marple : Nab Top Sanatorium.
Rainfall in millimetres	69.4	69.6	80.6	68.2
Tar.....	0.10	0.11	0.09	0.05
Carbonaceous matter other than tar.....	1.77	2.26	1.83	1.16
Ash .....	2.61	3.56	2.39	1.79
Soluble Matter.....	2.42	2.92	3.33	2.61
Total Solids.....	6.90	8.85	7.64	5.61
Sulphates { Included in	0.85	1.01	1.02	0.58
Chlorides { soluble	0.64	0.70	0.90	0.44
pH .....	4.5	4.3	4.0	4.4

Perhaps the most noticeable feature of the results is the acid nature of the deposits. This is shown by the pH values of the water collected. The pH due to the carbonic acid in the air would be about 5.5. Figures below this, therefore, indicate an acid deposit, and higher figures an alkaline deposit. Considering that the Marple gauge is fairly well in the country and shows a general record better than those obtained in the City, its acid rainwater is noteworthy. This shows how widespread may be the drift of acid smoke from the cities.

TABLE 25.

pH VALUES FOR THE FOUR STATIONS.

Month.	Broughton Senior School.	Drinkwater Park.	Ladywell Hospital.	Nab Top Sanatorium.
January.....	3.5	3.5	3.8	3.9
February .....	3.8	3.8	3.9	4.2
March.....	4.5	4.2	4.3	4.7
April .....	4.7	3.9	4.3	4.7
May .....	4.5	3.9	4.2	4.7
June .....	5.8	4.0	4.5	4.6
July .....	4.6	4.3	4.6	4.7
August .....	4.7	4.2	4.6	4.1
September.....	5.0	4.5	4.5	4.7
October.....	4.0	4.0	4.0	3.9
November.....	4.6	4.2	4.6	4.4
December .....	3.9	3.9	4.2	4.2
Average for 1945 .....	4.5	4.0	4.3	4.4

**HEAT-TREATED MILKS.**

In addition to the milk samples submitted for chemical analysis under the Food and Drugs Act, samples of heat-treated milk are also submitted in order to ascertain the efficiency of the heat-treatment and alternatively to detect the presence of raw milk. These samples are examined by the phosphatase test which depends on the liberation of free phenol from the salt, disodium phenyl phosphate, by the enzyme, phosphatase. This enzyme is always present in raw milk but is almost entirely destroyed by the amount of heat-treatment necessary for efficient pasteurisation, that is, necessary for the destruction of *m. tuberculosis* and other pathogenic micro-organisms. The amount of phenol liberated in the test is an approximate measure of the phosphatase remaining in the milk; a high result indicating insufficient heat-treatment and the presence of raw milk.

Two hundred and ninety-two samples of heat-treated milk have been examined by the phosphatase test during the year, a considerable increase over the number, 169, examined in this laboratory during the year 1944. The samples submitted were marked either pasteurised, sterilised or heat-treated milk. Of the total number examined, 198 were submitted by the City of Salford, 67 by the Borough of Stretford and 25 by the Borough of Eccles. The following tables gives particulars of the results obtained on the samples received from the above-mentioned sources :—



PHOSPHATASE TESTS ON  
SAMPLES SUBMITTED BY THE CITY OF SALFORD.

Type of Milk.	No. of Milks.	Correctly Pasteurised.	Insufficiently Heat-treated.	Grossly under Treated.
Pasteurised Milk.....	175	148	10	17
Heat-treated Milk .....	2	1	1	...
Sterilised Milk.....	21	21	...	...
TOTALS .....	198	170	11	17

PHOSPHATASE TESTS ON  
SAMPLES SUBMITTED BY THE BOROUGH OF STRETFORD.

Type of Milk.	No. of Milks.	Correctly Pasteurised.	Insufficiently Heat-treated.	Grossly under Treated.
Pasteurised Milk.....	26	24	1	1
Heat-treated Milk .....	37	26	4	7
Sterilised Milk.....	4	4	...	...
TOTALS .....	67	54	5	8

PHOSPHATASE TESTS ON  
SAMPLES SUBMITTED BY THE BOROUGH OF ECCLES.

Type of Milk.	No. of Milks.	Correctly Pasteurised.	Insufficiently Heat-treated.	Grossly under Treated.
Pasteurised Milk.....	25	25	...	...
Heat-treated Milk .....	...	...	...	...
Sterilised Milk.....	...	...	...	...
TOTALS .....	25	25	...	...

## VENEREAL DISEASES SCHEME, 1945.

### New Cases.

The number of new cases seen during 1945 was 2,354. These figures show an increase of 266 over 1944's total. From this total 1,129 were found to be suffering from Venereal Diseases in one form or another, and 1,225 were classified as non-venereal.

Venereal Diseases legally comprise Syphilis, Gonorrhœa and Chancroid. By non-venereal conditions are meant such cases as Balanitis, Non-specific Urethritis, Scabies, Phimosis and Paraphimosis, Warts and other conditions commonly aggravated by sexual intercourse.

Any case which is classified as non-venereal, and where the risk of venereal infection has been taken, is tested and kept under observation until the incubation periods of Gonorrhœa and Syphilis are passed.

There has been an increase of 205 Venereal Disease cases and 61 non-venereal cases over the 1944 figures, which were already high. The rapid rate of demobilisation during the latter months of 1945 is perhaps the major factor in these large increases.

If the Venereal Diseases are analysed under the headings of the separate diseases, a study of these figures will show that both Syphilis and Gonorrhœa show very sharp rises in incidence, whilst non-venereal infection figures are the highest ever recorded since the Clinic was opened. As I have pointed out in previous reports the latter feature is a good sign of the increasing V.D. consciousness of the general public.

### Sex Incidence.

There were 757 males and 372 female patients suffering from Venereal Diseases during the year. Both figures are considerably increased over last year's level, and include patients who have had previous treatment at other centres.

### Fresh Infections.

A " Fresh Infection " is an infection in which the disease is under twelve months duration and an " Old Infection " is one over twelve months' duration.

Of 630 new male Venereal Disease cases, 602 were fresh infections and of 350 female cases, 302 proved to be fresh infections. These figures do not include patients who have had previous treatment.

### Attendances.

Total attendances since 1928 are now 1,311,379. Total attendances for 1945 are 42,844. Of this total 13,009 were intermediate attendances and 29,835

were attendances for the Medical Officer's attention. The latter figure shows a further large increase, whilst the intermediate attendances (*e.g.*, for irrigations, dressings, etc.), are over 4,000 less than last year and the lowest ever recorded. This low figure for intermediate attendances—a figure likely to decline yet further—is a result of treatment with Sulphanilamides and Penicillin being more efficient and much shorter duration.

### Defaulters.

The total defaulter rate for this year was 6.15 per cent., the lowest figure on record for the Clinic.

Of dangerous (*i.e.*, infectious defaulters) the male percentage was 2.06 and the female 4.71.

The female figure has only been bettered on two previous occasions since 1928 and the male four times only. In view of war and post-war conditions of working away from home with quick transference of populations, I consider them very creditable.

Of non-infectious defaulters, the male percentage was 3.11, the female 3.02.

### Syphilis.

There were 275 new cases of Syphilis attending for the first time and not previously diagnosed at other centres. Of this total, 182 were cases in an early infective stage, *i.e.*, primary, or secondary stage Syphilis or Syphilis latent in the first year of infection.

Ninety-three cases were classified as chronic, including Endosyphilis, Tertiary and Visceral Syphilis, Neuro Syphilis and Congenital Syphilis.

Of acute cases, sero-positive primary Syphilis is the stage preponderating at first attendance of male cases (although the serio-negative stage accounts for 35 per cent.) and the late secondary stage predominates amongst females.

As regards rate of incidence of fresh infections of Syphilis there has been an increase of 50 per cent. in the male figures, as compared with 1944, and a further slight increase in the female figure.

### Congenital Syphilis.

Total new cases of Congenital Syphilis diagnosed and treated at the Clinic since 1931, now number 302. The figure for 1945 was 8, showing practically no change from 1944,



TABLE IX.

Cases of Congenital Syphilis from Item 3 of Forms V.D. (R) Classified in Age and Sex Groups.

Year.	Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Total. M. F.		Grand Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1931 .....	2	3	1	2	15	7	9	6	27	18	45
1932 .....	—	2	1	5	9	13	2	3	12	23	35
1933 .....	2	1	1	—	5	9	3	6	11	16	27
1934 .....	3	—	1	1	3	4	6	—	13	5	18
1935 .....	4	2	2	4	5	8	4	11	15	25	40
1936 .....	3	1	—	—	3	2	6	4	12	7	19
1937 .....	3	2	1	—	—	3	3	1	7	6	13
1938 .....	1	1	—	—	1	—	2	6	4	7	11
1939 .....	4	4	—	1	1	2	1	3	6	10	16
1940 .....	1	—	—	—	3	1	1	1	5	2	7
1941 .....	—	—	1	—	—	1	3	3	4	4	8
1942 .....	—	6	1	2	—	4	6	6	7	18	25
1943 .....	1	2	1	1	1	3	2	12	5	18	23
1944 .....	—	—	—	—	2	1	2	2	4	3	7
1945 .....	—	—	—	1	1	1	3	2	4	4	8
TOTAL .....	24	24	10	17	49	59	53	66	136	166	302

### Treatment of Syphilis.

The drugs in routine use for the treatment of Syphilis are :—

- (1) Penicillin.
  - (a) Dissolved in sterile Saline Solution.
  - (b) In Beeswax (2·5 per cent.-3·5 per cent.) and Arachis Oil (alternative solvent is Ethyl Oleate).
- (2) Arsephenamine Diglucoside (Stabilarsan)—Boots.
- (3) Meta-amino-para-hydroxy-phenyl-arsene Oxide (Mapharside)—Parke Davis.
- (4) Bismuth Oxychloride in Glucose (Chlorostab)—Boots.
- (5) Stabismol (oil soluble Bismuth)—Boots.
- (6) Bismuth Salicylate (suspension in oil)—Parke Davis.

During the year the treatment of Syphilis has undergone radical changes. Prior to 1945 the treatment of early Syphilis (primary, secondary and latent infections in the first year) was given either by the “ alternating continuous ” method (Arsenic and Bismuth) or by the “ concurrent intermittent ” method (also Arsenic and Bismuth)—in both methods, treatment, to be efficient and to ensure freedom from relapse, had to be continued on the average of at least one year.

Treatment by Penicillin was undertaken at this Clinic early in the year and on a big scale. Treatment has been more efficient and shortened from one year to about 10-12 weeks. Toxic effects have been conspicuous by their absence. During the major part of the year patients were treated by hospitalisation for  $7\frac{1}{2}$  days, during which 2,400,000 units of Penicillin were given in 60 injections at three-hourly intervals. Following this, 8-10 weeks of concurrent Arsenic and Bismuth were given. Results to date have been very good indeed.

The main drawback to this scheme was the need for hospitalisation and the patients fear of consequent loss of secrecy for the treatment. However, during the latter part of the year another big advance has been made. Research was being carried out by the Ministry of Health on the efficiency of Penicillin in Oil. The object was to slow down absorption and excretion of Penicillin and thus to enable one injection to remain efficient over a considerable period. The Salford Municipal Clinic was amongst the very first to be chosen for this work and since October, 1945, cases of Syphilis have been treated completely as out-patients using Penicillin in Oil followed by Arsenic and Bismuth. Treatment consists of one injection of Penicillin in Oil daily for 8 days followed by 8-10 weeks' Arsenic and Bismuth. Immediate results show great promise and further advances in treatment are in the offing.

During the year 3,757 injections of Penicillin were given to male patients at Hope Hospital and 5,169 to female patients.

### **Chronic Syphilis.**

The routine treatment in use embraces Stabilarisan, Mapharside, Tryparsamide, Stovarsol, Chlorostab and Collosol Iodine.

Penicillin has been used in a few selected cases of Neuro-Syphilis and has been given intrathecally and intramuscularly.

As before, cases that have had adequate treatment and are symptom free, although Wasserman fast, are lumbar punctured and providing the C.S.F. is clear, are kept under observation without treatment.

Thirty-six Lumbar Punctures were done—34 male and 2 female, including 12 for intrathecal Penicillin treatment for Tabes.

### **Gonorrhoea.**

During 1945 there were 655 fresh cases of Gonorrhœa, comprising 433 male and 222 female cases. These figures show an increase of 138 over last year.

### **Treatment.**

Treatment by Penicillin has been continued during the year.

In the main, treatment has been by four injections of 38,000 Oxford units at two to three-hourly intervals and the rate of cure has been extremely high.

### Ordinary Penicillin.

Rate of cure was **96-97%**.

There have been no toxic features and the few true relapses that have occurred have responded to a second course.

Later in the year treatment by one injection only of 200,000 units of Penicillin in Oil has been given with great success.

### Penicillin in Oil.

Given in 25 cases of acute Gonorrhœa with only one relapse which responded to a second injection. This works out to a rate of 96 per cent. immediate cure.

Tests of cure are done over a period of 6-7 weeks or longer, followed by blood tests at three and six months.

In cases where Gonorrhœa and Syphilis have been contracted at one exposure, the administration of the small dosage of Penicillin for Gonorrhœa has not so far been found to delay the incubation period of Syphilis to any extent. As a precaution a second blood test at six months is done in every case of Gonorrhœa treated by Penicillin. All cases are treated as out-patients.

### Chancroid.

There were 53 cases during the year, a decrease of 12 on 1944.

### Female Contact Tracing—Follow up Survey and Social Work, 1945.

During the year the Almoner's Department has endeavoured to ensure that patients would not be prevented by social problems from benefiting from the facilities provided by the Clinic. As far as possible each patient is interviewed on her first attendance and any matters likely to hinder attendance are discussed. Often a patient may require reassurance and sympathy to overcome fear, resentment or prejudice, and the establishment of a friendly atmosphere will sometimes bring a patient back with a difficulty which would otherwise have gone unmentioned. The anxiety which frequently adds to the burden can be lightened by discussing matters with a person aware of the problems involved. Efforts are thus made to prevent patients defaulting on treatment. When, however, a patient does default before the completion of treatment, follow up visits are made. Difficulties preventing attendance are discussed, and the need to continue treatment is explained.

During the year 297 patients were visited on 1,530 occasions.

Two hundred and thirty-seven patients were seen on 624 occasions.

Of these—190 patients returned.

43 failed to return.

51 could not be contacted.

9 returned, though not interviewed.

4 transferred to other clinics as a result of a visit.



According to infection the visits were as follows :—

	Sy.	Gc.	Both.	N.V.	Total.
Visited .....	120	94	19	64	297
Seen.....	106	80	18	33	237
Unseen.....	14	14	1	31	60
Returned .....	86	68	13	23	190
Returned, though not interviewed	6	2	—	1	9
Transferred .....	3	—	1	—	4

A number of those who attended, defaulted again, and had to be revisited. Those visits were as follows :—

		Subsequent attendance satisfactory.	Defaulted again.	Failed to attend on 2nd follow up.	Still visiting.
Returned after first default .....	190	83	107	27	10
Returned after second default .....	70	34	36	4	10
Returned after third default .....	22	6	16	—	8
Returned after fourth default .....	8	1	7	1	3
Returned after fifth default .....	3	1	2	1	1
	293	125	168	33	32

Thus, the actual number of defaults which were followed up were 465, and the number of occasions on which the patients returned were 293.

One hundred and twenty-five of the 190 patients who returned were attending regularly at the end of the year. It will be observed from the table that the higher the number of defaults the less likelihood is there of the patient maintaining a regular attendance at the Clinic.

A number of patients interviewed were found to need assistance and advice of varying kinds. Clothing was given to a number of patients, in four instances layettes were obtained and three patients were helped with bedding. Assistance was given to one patient to obtain a surgical belt. Where it appeared necessary, patients were referred to the Poor Man's Lawyer for legal advice, the Adoption Officer, Probation Officers or Moral Welfare Authorities.

For example—P.B. was a girl of 8 years who had been criminally assaulted. She was an intelligent, nervous child and was obviously suffering from the experience and the attention she was receiving. The matter was discussed with her mother who was anxious regarding the child's welfare. Bedding was obtained

to enable her to sleep on her own. The Children's Moral Welfare Worker was approached and on the completion of her treatment, P. was sent for convalescence. The Moral Welfare Worker is keeping in touch with the family and will be able to assist should the need arise.

A second example—B.B. was a married woman who attended the Clinic after being infected and deserted by her husband. She was also pregnant. Efforts were made to assist her to trace her husband and though he was contacted, he subsequently disappeared before proceedings for a separation could be taken. The patient was assisted with a layette. Her baby was born and she was able to commence work while he was cared for in a nursery. Her wage was only sufficient to cover the bare necessities and a voluntary society was therefore approached and a weekly grant made to enable her to manage.

These are typical examples for many, and illustrate the value of the follow up and social service.

The problems with which it is necessary to cope with are numerous, and varied. Many find it difficult to attend on account of hours of work or care of children. With the co-operation of the patient it is usually possible to overcome these difficulties. Harder to assist are those patients whose attitude is the basic trouble and who fail to attend due to resentment, fear of being seen or ignorance of the necessity for continued treatment. Constant supervision and encouragement are often required if they are to complete their cure. It is hoped that the services of the Department will enable patients to derive the fullest benefit from the improved methods of treatment now available.

#### Male Contact Tracing and Defaulters.

This work, which was begun in 1944, has been continued with good results. The work is done in Salford by one of the Male Nurses at the Clinic and as I have pointed out previously it is work which requires discretion and tact for success. The degree of successful follow up we have obtained is considerable, and makes the continuance of this work not only desirable, but essential. The following figures show the work accomplished :—

MALE.	Sy.	Gc.	N.V.	Chancroid.	Service cases.	Total.
No. of patients visited	46	47	4	3	2	101
No. of patients contacted	23	25	—	2	2	52
No. of contacts attending for treatment ...	18	23	—	2	2	45

Reasons for non-attendance :—

(a) Working away...	2	—	—	—	—	2
(b) Gone away—no trace .....	8	9	2	1	—	20
(c) Other reasons ...	17	15	2	—	—	34

Practically 90 per cent. of defaulters contacted have attended for treatment.

### **In-patient Accommodation.**

The male and female wards at Hope Hospital have been kept full during the year owing to the need of hospitalisation for Penicillin treatment of Syphilis to date. The wards are visited by the Venereal Diseases Officer and the Assistant Medical Officer.

A Dermatological Out-patients Clinic is held once weekly at Hope Hospital by the Venereal Diseases Officer and the work has increased considerably during the year. The Children's Dermatological Wards are also visited by the Venereal Diseases Officer.

Dr. Blades has continued her Ailments of Women Clinic once weekly.

### **General.**

The Salford Venereal Diseases Treatment Centre is well equipped to deal with every aspect of Venereal Disease and the Venereal Diseases Officer is frequently consulted by other authorities on Venereal Disease problems.

Among other advances made during the year (and following on published results made on the transmission of jaundice by syringes) was the routine sterilisation of all syringes for intravenous work by boiling in place of spirit.

This, it is hoped, will secure a noticeable reduction in the incidence of infective Hepatitis.

Medical Practitioners attend the Salford Municipal Clinic for post-graduate instruction to obtain the University or Ministry of Health Certificates. During the year, two post-graduates attended for this instruction.

In addition, post-graduate courses for demobilised officers have been arranged in collaboration with Dr. Langley of the Manchester University and the Venereal Disease lectures are given at this Clinic. Lectures are also given to the Nursing Staff from Lake Hospital, Ashton-under-Lyne.

Among the propaganda work carried out during the year was :—

- (a) Exhibition of Venereal Disease photographs and letterpress published by The Central Council of Health Education. This exhibition was shown at one of the larger local factories, at Regent Road Clinics, and also to the staffs at Hope and Ladywell Hospitals.
- (b) A lecture in October by Dr. Gill for demobilised Medical Officers on Modern Aspects of Venereal Diseases.

During the war considerable research has been carried out at Oxford by Professor R. A. Peters on a substance O.X. 127 (renamed B.A.L.) for use as an anti-arsenical preparation. In collaboration with Professor Peters, clinical notes of a case of severe arsenical dermatitis treated by B.A.L. at Hope Hospital under Doctor Gill were prepared and will be included in his subsequent publication of results.

In conclusion, I wish to thank the Assistant Medical Officers, Nurses, Clerical Staff and Orderlies for their loyal and efficient work.

The Annual Report to the Ministry of Health, Form V.D. (R) for 1945, is attached.



## APPENDIX I.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED  
THE 31ST DECEMBER, 1945.

[illegible]



## APPENDIX I—continued.

RETURN RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT SALFORD DURING THE YEAR ENDED THE 31ST DECEMBER, 1945.

		Syphilis.		Soft Chancre.		Gonorrhœa.		Non-venereal or undiagnosed conditions.		Totals.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Totals.
11. Number of attendances:—												
(a) for individual attention of the medical officer(s).....		8,455	10,057	239	—	3,892	3,001	2,614	1,577	15,200	14,635	29,835
(b) for intermediate treatment, e.g., irrigation, dressing.....		173	—	57	—	3,261	6,800	1,107	1,611	4,598	8,411	13,009
TOTAL ATTENDANCES .....		8,628	10,057	296	—	7,153	9,801	3,721	3,188	19,798	23,046	42,844
12. In-patients:—												
(a) Total number of persons admitted for treatment during the year .....		105	104	1	—	9	7	7	2	122	113	235
(b) Aggregate number of "in-patient days" of treatment given .....		1,528	1,612	7	—	63	222	76	54	1,674	1,888	3,562
								Other Diseases.				
								M.	F.			
13. Number of cases treated with penicillin.....		64	90	—	—	370	217	—	2†	434	309	473
		Under 1 year.		1 and under 5 years.		5 and under 15 years.		15 years and over.		Totals.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
14. Number of cases of congenital syphilis in Item 3 above classified according to age periods.....		—	—	—	1	1	1	3	2	4	4	
		Microscopical.						Serum.				
		for Syphilis.	for Gonorrhœa.			Cultural for Gonorrhœa.		for Syphilis.	for Gonorrhœa.	Cerebro-spinal fluid.	Others for diagnosis of Venereal Disease. Kahn Tests.	
15. Pathological Work:—												
(a) Number of specimens examined at, and by the medical officer of, the Treatment Centre.....		330	6,369			—		—	—	—		—
(b) Number of specimens from patients attending at the Treatment Centre sent for examination to an approved laboratory.....		—	—			167		4,170	1,393	—		4,170

STATEMENT SHOWING THE SERVICES RENDERED AT THE TREATMENT CENTRE DURING THE YEAR, CLASSIFIED ACCORDING TO THE AREAS IN WHICH THE PATIENTS RESIDED.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Salford.	Man- chester.	Lancs. C.C.	Cheshire C.C.	Bolton.	Other Areas.	British Seamen.	Foreign Seamen.	Total.
A. Number of cases from each area included under the following headings in Item 3:—									
Syphilis.....	144	26	79	4	1	—	15	6	275
Soft Chancre .....	19	6	14	1	—	1	10	2	53
Gonorrhœa .....	280	104	141	10	5	7	75	38	660
Non-venereal and undiagnosed conditions.....	526	158	311	25	7	22	110	39	1,198
TOTAL .....	969	294	545	40	13	30	210	85	2,186
B. Total number of attendances of all patients residing in each area.....	21,907	5,218	11,291	550	476	517	2,133	752	42,844

\* "Syphilis, latent in 1st year of infection," applies to cases presenting no clinical sign of syphilis but discovered (by blood test, etc.) to have contracted this disease within the preceding 12 months.

† 1 ? G.C. Arthritis. 1 ? G.C. Salphingitis.

## MATERNITY AND CHILD WELFARE CLINICS AND CENTRES.

### Child Welfare Centres.

It has been found necessary to hold an additional session at Regent Road and Hope Welfare Clinics because of increased attendances. There are now 23 Child Welfare sessions held weekly. The total attendances at the various centres have been well maintained. The attendances at the Hope Clinic have steadily increased since its opening in 1943, showing that the Clinic has met a real need in this area. Additional Centres are urgently needed in the Kersal and Mandley Park areas. With the exception of Ordsall Centre, clinic premises are unsatisfactory.

### Ante-natal Clinics.

Seven ante-natal sessions are held at the three main centres in the City weekly, and four sessions per month are held at the Royal District Nurses' Home. The following figures show the attendances for the year. The total attendances at these Clinics were 5,346, the total number of consultations being 4,935.

### Post-natal Clinics.

The attendances at Post-natal Clinics have shown an improvement this year. The following figures show the attendances for the year. The total attendances were 209, the total number of consultations being 209.

As each midwife finishes a case she invites her patient to attend the Post-natal Clinic and gives her a card with the date and time on which she should attend.

A special Post-natal Clinic is held three times monthly at the Royal District Nurses' Home for the cases booked by and attended at their confinement by the midwives and pupil midwives employed there. A feature of this clinic is that the mothers bring their new-born babies with them. The pupil who attended the mother at her confinement is present when the examination of the mother and baby is made. The pupils are greatly interested in this Clinic and there is a friendly rivalry among them as to who can get the greatest number of mothers to attend.

The Clinic was first started in December, 1944. At first attendances were disappointingly low but these have steadily improved. Altogether 47 mothers out of a possible 132 have attended this Clinic during the year. In 13 cases no abnormality was found and the mothers were fit and well. Eighteen were found to have sustained laceration of the cervix of varying degrees, and seven had cystocele. Three women were referred to the Gynæcological Clinic at Hope Hospital—two for retroversion of the uterus and one for repair of a complete tear of the perineum which had occurred at a previous confinement. Six were found to be suffering from general debility and anæmia, and one from severe anæmia. These were referred either to their own doctor or to hospital for treatment.



## PUBLIC HEALTH NURSING SERVICE.

### Health Visitors.

During the year the number of Health Visitors on the staff was increased to 21. The additional Health Visitor was appointed to replace a School Nurse, thus making it possible for full-time combined work to be undertaken in Kersal Ward in addition to Mandley Park and Ordsall Park Wards. Six of the Public Health Nurses are now doing full-time combined work, which includes Health Visiting, School Nursing and Tuberculosis Visiting. The remainder are responsible for School Nursing in Nursery Classes only. Tuberculosis Visiting is also undertaken by 12 members of the staff, in three-fourths of the City. There is one full-time Tuberculosis Nurse remaining on the staff.

The duties of the Health Visitors under the Co-ordination of Nursing Services Scheme are therefore as follows :—

#### *Maternity and Child Welfare.*

- (a) The general care of the health of all children under the age of five years, and of their mothers.
- (b) The teaching of the art of Mothercraft and Home Management to mothers in their own homes and in Maternity and Child Welfare Centres.
- (c) Particular care of children discharged from hospital, daily-minded children, illegitimate children and those whose home care is unsatisfactory.

#### *School Nursing.*

- (a) Assisting at the School Medical Inspections, weighing and measuring of children and carrying out of vision tests.
- (b) Routine hygiene inspections which are carried out every three months.
- (c) Home visiting in connection with medical treatment and cleanliness.

#### *Tuberculosis Visiting.*

- (a) Visiting of tuberculosis patients in their own homes and teaching them how best to live at home and in a community without infecting others.
- (b) Persuading contacts to attend the Dispensary for examination.

The Co-ordination of the Nursing Services was first begun in 1942, and it is now possible to make some general observations on the scheme.

The success of combined work for Health Visitors, *i.e.*, combined Health Visiting, School Nursing and Tuberculosis Visiting, depends on the availability of individual Health Visitors to undertake either Maternity and Child Welfare or School work without the one conflicting with the other. In order to achieve this it is essential that School Medical Inspections be arranged at a time when the Health Visitor is not due to attend a Maternity and Child Welfare session

or a Tuberculosis Dispensary, otherwise the main value of combined work, *i.e.*, **one** Health Visitor supervising the health of the child from birth to school leaving age, and only one visitor for each home, is lost. As it is Maternity and Child Welfare work tends to be subordinated to School Medical work. In order to obviate this there should be complete co-ordination of the Maternity and Child Welfare and School Medical Services with not only the Nursing staff doing combined work, but also the medical and administrative staffs. It might then be possible to arrange for all Maternity and Child Welfare sessions to be held in the afternoons only and all School Medical Inspections and Minor Ailments Clinics to be held mornings only.

During the year records have been kept of the amount of time a Health Visitor spends upon each section of her work, and it has been found that less than one-third of this time is devoted to home visiting. Home visiting is the keystone upon which the success of any Child Welfare Scheme depends. Every extra duty laid upon the Health Visitor—additional clinic sessions, extra visits to Nursery Schools and Classes, or any other innovation results in less and less time being spent upon this most important duty. Health Visiting is work which shows no immediate result. Unlike Midwifery and District Nursing it can be partially or wholly neglected without causing a public outcry. Only an event such as the war-time evacuation of women and young children can focus public attention on the widespread ignorance of mothercraft and hygiene which still exists. At least 60 per cent. of a Health Visitor's time should be devoted to the teaching of these important subjects, both in the home and in the Welfare Centre. This can only be done by reducing the number of her other duties, either by increasing the number of Health Visitors or by employing less highly qualified personnel in the clinics.

The combining of Tuberculosis visits with Maternity and Child Welfare work has proved valuable in that special supervision can be and is exercised over the children attached to the household of a tuberculosis patient. This is particularly important in those cases where patients have refused Public Medical Treatment and are therefore not visited themselves by the Health Visitor.

The present establishment of Health Visitors for Maternity and Child Welfare work has remained unaltered for at least sixteen years, and I would suggest that the time has now come for the position to be reviewed. At least two additional Health Visitors are necessary to cope with this routine work. From May to the end of the year alone the child population under five increased by 603, a sufficient case load for one full-time Health Visitor.

#### **Student Health Visitors' Scheme.**

All four Student Health Visitors who commenced training under this scheme in October, 1944, were successful in obtaining the Health Visitors' Certificate.

#### **Post Graduate Courses.**

Members of the Health Nursing staff attended the Post Graduate Courses during the year held at Manchester and Hull.

### **Teaching Outside the Department.**

A series of ten lessons on Public Health Services were given by one of the Health Visitors to a class of girls at Broughton Modern School. This was combined with visits to a Welfare Centre and to a Day Nursery. A course of twelve lectures on Home Nursing was given to members of the Girls' Training Corps by a Health Visitor.

### **Clinic Nurses.**

There are now three Clinic Nurses employed in the Maternity and Child Welfare Department. They carry out duties connected with diphtheria immunisation in schools, clinics and in homes. Their other duties include some School Nursing and attendances at Ante-natal and Post-natal Clinics.

### **Premature Baby Nurse.**

The nurse specially appointed for this work resigned in September in order to take the Health Visitors' Training Course, and great difficulty was experienced in obtaining a successor. It was, therefore, decided to send one of the Clinic Nurses to Hope Hospital for a short period of training in the Premature Baby Ward and to appoint her to the post.

During the year a total of 97 premature babies, *i.e.*, babies weighing less than 5½ lbs. at birth, were notified to the Department. Forty-three premature babies were notified by Municipal Midwives; this included six sets of twins.

### **DINNERS FOR EXPECTANT AND NURSING MOTHERS.**

Throughout the year this service for the mothers of the City was carried on by the Ladies' Public Health Society, at the Pendleton and Ordsall Clinics. At Pendleton 8,421 dinners were served and at Ordsall 8,870.

The ladies of the Encombe Place Mothers' Guild hope to resume their activities early in the New Year.

### **CONTRACEPTION.**

During the year 53 cases were referred to the Manchester, Salford and District Mothers' Clinic by the Medical Officers of the Department. Thirty-eight of these attended the Clinic.

### **BREAST FEEDING CLINIC.**

This clinic is fulfilling a very definite need, and as more mothers are becoming aware of it they are asking to be sent there for tuition. The majority seek help because they feel that they have not sufficient milk for the growth and development of their babies.

As in 1944 all cases referred to this Clinic have been "followed up" by the Health Visitors and special reports sent in as each child reaches the age of six months.



During the year 110 mothers were referred to the Clinic. These included seven mothers who do not now live in Salford and it has not been possible to get full reports on them.

Of the 110 cases referred during the year, complete reports have been obtained on 50 of these. There are also completed reports of 30 cases referred in 1944, the final reports of whom were not available until this year.

Of the 89 mothers reported on, 35 breast fed their babies for six months, 24 were partly breast fed and 16 failed to breast feed at all. These figures appear to be small but it must be pointed out that probably all these babies would have been artificially fed, if the mothers had *not* been referred to the Clinic.

### DIPHTHERIA IMMUNISATION.

The number of children immunised in Salford during 1945 was 3,559, and of these 3,028 were under five years.

The total number of children immunised in Salford at 31st December, was 23,604, out of a child population of 36,706, *i.e.*, 64·2 per cent. This figure is still too low. At least 80 per cent. of the children should be immunised.

A great deal of work in connection with diphtheria immunisation has been carried out by the Clinic Nurses. They immunised children at schools, in the clinics and in their own homes. The total number of visits made by these nurses to children in their own homes was 2,781, and in only 52·5 per cent. were the visits "successful." These visits are to children for whom repeated invitations have been sent without effect, or who, having begun immunisation, have not completed it.

In June a new scheme was started. It was decided to begin immunising infants at the age of five months. This was done to ensure that the infant was well protected by the time it was one year old. It has been found difficult to persuade some mothers to have their children immunised at this early age.

When an infant reaches the age of five months a letter is sent inviting the mother to bring him to the Child Welfare Clinic for immunisation. If there is no response to this first invitation a second one is sent two weeks later. If this does not bring the desired result a special visit is made by the Health Visitor, who tries to persuade the mother to attend. If the Health Visitor reports that the mother prefers to wait until the child is older, or that the child is ill, another invitation is sent later.

If the mother still does not attend on receipt of this third invitation, then a Clinic Nurse visits the home and offers to immunise the child there.

Seven hundred and twenty invitations were sent out for babies born in June, July and August. By the end of the year 111 of these has been immunised ; 100 mothers preferred to wait until the child was nine months old, and 24 of the infants were to be immunised by private practitioners. The remaining 445 gave various medical reasons for postponement.

## THE PLACE OF THE PSYCHIATRIC SOCIAL WORKER IN MATERNITY AND CHILD WELFARE.

### An Experiment at the Pendleton Clinic.

For the three months, March to May, of this year, an experiment was carried out at the above clinic. Arrangements were made for Miss Joseph, the Psychiatric Social Worker for the Child Guidance Clinic, to attend at Police Street Clinic for one session weekly. The plan was that Miss Joseph should see any mothers with babies who were showing any kind of difficulty of a non-physical nature. The majority of children seen by Miss Joseph were referred for temper tantrums or feeding difficulties. On an average one new case a week was seen plus any others who had been seen on previous weeks, and where further interviews were indicated. This gave an opportunity for the problem to be discussed really fully and to discuss any physical defects with the Medical Officer and the Health Visitors at the Clinic. It was satisfactory to find that even in the short period of the experiment that a definite improvement was obtained in three cases of fairly severe feeding difficulties, and one of prolonged temper tantrums and an enuritic girl.

If the work had gone on longer it would have been possible for the children to have been seen at an earlier stage in the problem, and the work thus become really preventive. Difficulties seen at an early stage can be overcome before they become part of the child's make-up, and thus further problems prevented. It almost invariably happened that a child referred for an isolated problem showed other problems too.

The mothers attending the clinic greatly appreciated the opportunity to talk over behaviour difficulties in their children with a psychologically trained worker.

There is a place in the Maternity and Child Welfare Scheme for a psychologist or psychiatric social worker who has had special experience with, and interest in, babies. Such a worker should attend the Child Welfare Clinics at regular intervals, and she should have time to talk with the Health Visitors who are closely in touch with individual cases. This worker should also be in close touch with the Child Guidance Clinic as in some cases it might be necessary to have a fuller investigation and possibly an intelligence test done.

### THE UNMARRIED MOTHER.

During the year arrangements made for the notification of the names of unmarried mothers continued to function. Included among the 115 notifications received were the names of 35 married women who were having illegitimate children.

The largest number of notifications—47—came from Hope Hospital. Other notifications were from Medical Officers of the Department, Midwives and Health Visitors. Fourteen women came to the Department of their own accord.



Ninety-eight of the women were interviewed at the Health Department, 15 in their own homes and two in the hospital.

The problem of the married woman and her illegitimate child has proved to be greater than that of the single girl. Very often the married woman does not seek help until the pregnancy is well advanced, when accommodation for the confinement is difficult to obtain owing to the great demand on hospital beds. In cases of this type more difficulty arises after the child is born. It is not always possible for the mother to take the child home. The only solution for cases like this is early adoption of the child. In the case of girls this is fairly easy—most prospective adopters want to take baby girls. With boys accommodation has to be found in a residential home. Failing this the mother has no alternative but to take the child home. This often leads to trouble with her husband and perhaps the breaking up of the home.

The problem of the single girl is rather different. Her need is for financial help and assistance in finding suitable accommodation for herself before confinement, and with her baby after confinement. She also requires advice on obtaining an Affiliation Order, etc. The finding of suitable accommodation for these girls is very difficult as there is not nearly sufficient hostel accommodation to take them. The hostels available are mostly run by voluntary organisations and I have to acknowledge with grateful thanks the very considerable amount of help given in these cases by the Sisters at St. Teresa's Convent, Higher Broughton, Colonel Thomas, of the Salvation Army, the Diocesan Moral Welfare Association, the Methodist Moral Welfare Association, and others.

### ADOPTIONS.

Sixty of the expectant mothers mentioned in the previous section made pre-natal application for arrangements to be made for the adoption of the child. Half of these applications were cancelled after the birth of the infants, the mothers having decided to keep them themselves. A few applications were cancelled because the child was considered unsuitable for adoption, because of the mothers' medical history.

In addition to the 60 applications received from expectant mothers, 45 applications were received from parents for assistance in the adoption of their children. There has been a marked increase in the number of these applications during the last four months of the year, *i.e.*, since the cessation of hostilities.

There have been also 46 applications from prospective adopters—75 per cent. of these were for girls.

Twenty-four children were taken for a trial period with a view to adoption, and nineteen adoptions were made legal.

This section of the Department's work takes up a considerable amount of time. Each case requires several interviews with parents and with prospective



adopters, and much correspondence. Careful enquiries are made as to the suitability of the adopters, in every way. A medical examination of the child, including a blood test, has to be arranged. During the trial period reports on the child's progress are obtained from time to time. Requests are received from Adoption Societies and from Welfare Authorities for reports on the home conditions of prospective adopters living in Salford. There were 16 such requests during the year.

#### THE ILLEGITIMATE CHILD.

A register is kept of all the illegitimate children in the City. During the year the names of 174 children were added to this register, making a total of 433 at the end of the year. These are classified as follows :—

Satisfactory.....	143 (including 9 in St. Teresa's Home)
Fairly satisfactory.....	213
Unsatisfactory .....	78

#### INFANT LIFE PROTECTION.

The foster children in the City can be divided into two main groups :—

- (1) Those cared for in individual homes.
- (2) Those in residential homes.

##### (1) *Individual Homes.*

At the end of the year eight foster children and eight foster-mothers were on the register.

During the year nine new children were added to the register and 13 removed from it.

All the children are satisfactorily cared for.

##### (2) *Residential Homes.*

There have been 24 foster children maintained at St. Teresa's Home during the year.

#### INFANT MORTALITY.

The infant mortality rate for the year again shows a slight decrease, the figure being 61 per 1,000 live births, as compared with 62 in 1944, and 69 in 1943. This is the lowest figure ever recorded in the City.

The neo-natal deaths account for a very high proportion—62·3 per cent.—of the total infant deaths, and of these 41·3 per cent. are certified due to prematurity. The other principle causes of infant deaths are pneumonia and bronchitis and gastro-enteritis. These, however, show a slight decrease as compared with 1944. In 1944, 34·6 per cent. and 20·1 per cent. of infants died from these two causes. The corresponding figures for 1945 are 28 per cent. and 14·3 per cent.

The following table shows the infant deaths for the year.

## DEATHS OF INFANTS, 1945.

Cause.	1st Month.	2nd Month.	3rd Month.	4th Month.	5th Month.	6th Month.	7th Month.	8th Month.	9th Month.	10th Month.	11th Month.	Total.
Prematurity.....	46	...	...	...	...	...	...	...	...	...	...	46
Congenital Debility .....	10	...	...	...	...	...	...	...	...	...	1	11
Congenital Defects.....	8	2	...	...	1	...	...	...	...	...	...	11
Birth Injuries.....	4	...	...	...	...	...	...	...	...	...	...	4
Marasmus.....	1	...	...	2	1	...	...	...	...	...	...	4
Gastro-enteritis.....	7	9	5	...	2	2	...	2	...	...	...	27
Pneumonia and Bronchitis	24	6	3	6	2	2	2	1	4	1	1	52
Cerebro-Spinal Meningitis...	...	...	...	...	...	...	...	...	1	...	...	1
Measles.....	...	...	...	...	...	...	...	...	1	...	...	1
Whooping Cough .....	...	...	1	...	...	...	1	...	...	...	...	2
Congenital Specific Diseases	1	...	...	...	...	...	...	...	...	...	...	1
Meningitis .....	...	...	...	...	...	...	...	...	...	1	...	1
Other Causes .....	12	...	3	4	...	1	2	...	...	...	...	22
TOTAL.....	113	17	12	12	6	5	5	3	6	2	2	183

### MATERNAL DEATHS.

There were 10 maternal deaths in Salford during the year. Four of these were cases admitted to Hope Hospital from areas outside the City.

The cause of death in the six Salford cases were :—

1. Obstetric shock. Retained placenta. Post-partum hæmorrhage.
2. Puerperal fever.
3. Hæmorrhage following abortion due to chronic myocarditis and œdema of lung.
4. 1 (a) Uræmia.  
           (b) Accidental hæmorrhage.  
           (c) Toxæmia of pregnancy.
5. 1 (a) Septicæmia.  
           (b) Septic abortion.
6. 1 (a) Septic abortion.  
           (b) Multiple lung abscesses.

A post-mortem examination was performed in five cases.

### REPORT ON ALMONER'S ATTENDANCE AT MATERNITY AND CHILD WELFARE CLINICS.

The Almoner attended the Ante-natal Clinic on Monday afternoons at Regent Road from July, 1945. From then until the end of the year, 54 patients were seen.

They were normally interviewed on their first attendance before seeing the doctor, and particulars obtained regarding the position of help at home during their confinement, the financial position, of their need for beds or bedding, clothing or other difficulties.

In 32 instances the position appeared satisfactory. Routine advice was given regarding the obtaining of dockets for bedding, Service allowances, etc.

Twenty patients were interviewed twice regarding matters which required further attention and two patients were interviewed three times.

In two cases financial assistance was obtained for bedding. Layettes were obtained for three patients and two unmarried mothers were referred to the Assistant Superintendent Health Visitor.



### **PHYSIOTHERAPY.**

This year has been a very difficult one from a working point of view, the staffing shortage has been acute and the lack of suitable and adequate accommodation at all the clinics makes it impossible to obtain the full benefit from all physiotherapy treatments.

In spite of overpowering difficulties the work has continued and the scope of the clinics increased. Whenever possible it is arranged that a baby or school child requiring one or more treatments, such as artificial sunlight and exercises, may have them both at the same visit, both saving the mother's time and shortening the period a child is absent from lessons.

#### **Artificial Sunlight Clinics.**

Unfortunately the number of treatment periods has been reduced at all centres, which means that children have far too long a waiting period before starting treatment. It is hoped that this will be altered quickly as soon as increase of staff and accommodation is available. It is vital that before next winter sunlight treatment should be available for every child as soon as required. The total attendances at these clinics were 12,469, the number of individuals treated being 2,660.

#### **Orthopaedic Treatment for Children under Five.**

At three Welfare Centres it has now been possible to allow two periods per week for treatment and at the same time visit sunlight treatment may also be had when required. The number of periods is not sufficient for such a large area which means that a short treatment must be given, or that a child has a long waiting period prior to treatment, during which period the condition steadily becomes worse. The total attendances at these Clinics were 3,083, the number of individuals treated being 372.

#### **Orthopaedic Treatment for Children over Five.**

The School Clinics have not been so busy this year, either in the sunlight or remedial departments, and more cases could be treated if referred by the School Medical Officers. There have been several requests from head teachers to hold remedial classes on the school premises; this would be very much more satisfactory from every point of view, but so far it has only been possible to hold one class per week at each Special School.

The classes started by the teachers to correct simple postural defects in the school have not continued which is very disappointing.

#### **Ante- and Post-natal Exercises.**

A small start has been made to hold these classes at three centres once a week, and it is hoped that with the Midwives' co-operation the mothers will appreciate the benefits of these exercises during the waiting period, at the actual confinement, and by a quicker return to health and well-being after baby is born.

## MUNICIPAL MIDWIFERY SERVICE.

### Supervision of Midwives.

During 1945 there were 23 Midwives employed in Domiciliary Midwifery in the City. This number includes three Midwives employed by the District Nursing Institution. The total time taken up by holidays, Post Graduate Courses, Analgesia training and sickness amounted to 36 months, which means that there were 20 Midwives on duty the whole of the year.

During 1945, 1,509 cases were attended by Domiciliary Midwives, making an average of 75·9 per Midwife.

In 159 of these cases the Midwife was acting as a Maternity Nurse.

Gas and Air Analgesia was administered in 94 cases.

### Domiciliary Visits.

Nursing visits.....	28,815
Ante-natal visits.....	4,165
Special visits .....	774

At the Ante-natal Clinics run by Municipal Midwives six sessions per week were held. The number of attendances at these sessions being 4,954.

### Flying Squad.

The Flying Squad was called out for seven cases. For four of these cases St. Mary's Hospitals Flying Squad was called, as the unit from Hope Hospital was not available owing to shortage of staff.

### Notifications.

The following notifications were received from Domiciliary Midwives during 1945 :—

Calling in medical assistance...	816
Contact with infectious disease	10
Stillbirths.....	22
Infant deaths.....	12 (9 of these were premature infants)
Artificial feeding of infants....	31

### Ophthalmia Neonatorum.

Twenty-six cases were notified during the year. Nineteen of these occurred in the practice of Domiciliary Midwives, five occurred in Hope Hospital, and two were notified by an Assistant Medical Officer of Health.

All cases made a satisfactory recovery.

### **Pemphigus Neonatorum.**

Four cases were notified during the year—all from Domiciliary Midwives. All four made a satisfactory recovery.

### **Puerperal Pyrexia.**

Thirty-three cases were notified during the year.

15 were notified from Hope Hospital.

1 was notified from a Private Nursing Home and was removed to hospital.

14 were attended by Municipal Midwives (nine of these were removed to hospital).

1 occurred in the practice of a general medical practitioner.

2 were notified by general medical practitioners as due to abortion and were removed to hospital.

### **Premature Baby Service.**

From September, 1944, to September, 1945, 53 infants weighing  $5\frac{1}{2}$  lbs. or less at birth were notified by the Municipal Midwives. Of these 10 were said to be full-time babies but immature, the remaining 43 were premature. The premature included six sets of twins.

### **Premature Babies.**

Males .....	23	Legitimate .....	42
Females .....	20	Illegitimate .....	1
First pregnancy .....	19		
Second pregnancy .....	11		
Third pregnancy.....	6		
Fourth pregnancy .....	1		
Seventh pregnancy .....	1		
Ninth pregnancy .....	1		

### **Weights.**

3 lbs. and under.....	3	All died a few hours after birth (one admitted to hospital).
Over 3 lbs. and under 4 lbs....	5	Four removed to hospital—three died, one nursed at home—living.
Over 4 lbs. and under $4\frac{1}{2}$ lbs.	10	Five removed to hospital—two died, five nursed at home—1 died.
Over $4\frac{1}{2}$ lbs. and under 5 lbs.	9	All nursed at home—one died day after delivery.
Over 5 lbs. and under $5\frac{1}{2}$ lbs.	16	Four admitted to hospital, twelve nursed at home—all living.



Thus out of the 43 cases notified, 10 died before they reached the age of one month. Those weighing 3 lbs. and under died within a few hours of birth.

In only nine cases was there any abnormality noted in the health of the mother during pregnancy. Two mothers suffered from toxæmia and one from anæmia. The general health of the remaining six was said to be "poor."

In 35 cases the labour was normal; there was one breech delivery and one forceps delivery. In the forceps case the infant weighed 4 lbs. at birth, was asphyxiated and died immediately after admission to hospital. In the breech delivery the infant weighed 4 lbs., was admitted to hospital on the second day and was alive at the end of one month.

Twenty-five of the cases were visited by the Premature Baby Nurse. These were "followed up" by the Health Visitors during October. All made satisfactory progress except one which had to be admitted to hospital with Imperforate Anus.

#### Immature Babies.

Of the 10 infants who were said to be full-time but weighed less than  $5\frac{1}{2}$  lbs. at birth, three were first children, one was a third child, three were fourth in the family, two fifth and one tenth. The weights of these children were:—

One at $3\frac{1}{2}$ lbs.	One at $5\frac{1}{4}$ lbs.
One at 4 lbs.	Six at $5\frac{1}{2}$ lbs.
One at $4\frac{3}{4}$ lbs.	

The health of the mothers during pregnancy was stated to be good in eight cases. In the other two cases the mothers were reported as being anæmic. There was one forceps delivery. The other labours were stated to be normal, but two of the infants were born before the arrival of the Midwife. One of these died at one month from subarachnoid hæmorrhage.

Seven infants were referred to the Premature Baby Nurse and one was admitted to hospital on the second day. All made satisfactory progress except one which died at two months from gastro-enteritis.

#### Home Help Service.

There were 140 applications from patients for Home Helps during 1945. One hundred and one patients were supplied with this service. Seven patients were admitted to hospital for confinement on account of abnormality. Twenty-seven patients made other arrangements and cancelled their bookings. In five cases no Home Help was available.

## AN INVESTIGATION INTO INFANT MORTALITY IN DIFFERENT SOCIAL CLASSES IN SALFORD.

It has been clearly shown by reports of the Registrar General that there is significant variation in the chances which an infant has of reaching its first birthday, dependent upon the social class of the parents. In his report for 1930-32, the Registrar General gives the differential rates of infant mortality for England and Wales in accordance with five classes, as follows :—

<i>Class.</i>	<i>Deaths per 1,000 legitimate live births.</i>
1. Professional.....	32·7
2. Intermediate.....	45·0
3. Skilled.....	57·6
4. Semi-skilled.....	66·8
5. Labourers.....	77·1

In studying infant mortality in one's own City it is interesting to find significant variation among groups taken from different localities.

Four groups were chosen, in each of which there had been between 1942 and 1945, 400 to 500 births.

The first group lived in houses situated in 24 streets which are regarded as amongst the best in Salford (Kersal-Claremont Road areas) ; the second in houses of the intermediate type—semi-detached villas where the occupations roughly correspond to the intermediate group of the Register General (*e.g.*, Lancaster Road) ; the third in houses of the type usually occupied by the artisan class (Charlestown) ; and the fourth in slum property scheduled for demolition.

The size of groups 2-4 was determined by the number of births in group 1 which had the lowest birth rate. It was hoped to obtain groups in which there had been 1,000 births, but as the records prior to 1942 were unsuitable for the purposes of this investigation, 400 had to suffice. A list of the total infant births and the mortality rates in the four groups is appended.

(1) It is of interest to note that the greatest mortality difference between the groups is in those deaths between the first and twelfth months of life. In the first two groups over the period of four years there were only eight deaths and not a single one took place after the age of six months, whereas in the third group there were twenty-one deaths, and in the fourth twenty-nine. Amongst infants between one and twelve months, deaths from gastro-enteritis and respiratory diseases were low in groups 1 and 2. In group 3 respiratory diseases and enteritis were responsible for 54 per cent. of the deaths, respiratory diseases predominating, whilst in the fourth group enteritis caused 33 per cent. of the deaths as against 22 per cent. caused by respiratory diseases (total 55 per cent.).

(2) **Neo-natal deaths.** The numbers of neo-natal deaths in each group were not greatly dissimilar (10, 10, 14 and 11), but in groups 1 and 2 they formed nearly three-quarters of the total infant deaths ; whereas they formed only one-third of the deaths in groups 3 and 4.

(3) During the period of the investigation (1942-45) the difference in incomes between the various classes was much lessened owing to the high wages of the artisans. Rationing restrictions meant that food was more evenly distributed among the classes than was the case in pre-war years. In many cases the incomes of families in the lower classes were equal to or higher than those of some of the professional and some of the intermediate groups.

(4) It is also of interest to note that the infant mortality rate for group 1 was 37—not very dissimilar from the rate for class 1 of the Registrar General's Report, 1930-32, which was 33. Infant mortality for group 4—75—also corresponded closely with the class 5 figure of the Registrar General which was 77.

(5) It is sad to think that a child born in Charlestown has only half the chance of a child born in Claremont of reaching its first birthday. Common-sense shows that some factors at least are environmental—overcrowding in badly constructed and badly situated houses, sanitary defects, lack of green spaces—and can be readily attacked thus giving a fairer chance to the poorer child.

(6) It must be realised that our classification is very rough, *e.g.*, some of the families living in Charlestown and perhaps in the slums may belong to class 3 of the Registrar General—skilled workers. An investigation of infant mortality is being undertaken amongst families whose class as defined by occupation differs from their class as defined by district of residence, in an endeavour to evaluate the relative responsibility of the various factors.



	Professional and Higher Income Group ( <i>e.g.</i> , Kersal- Claremont).	Intermediate (Lancaster Road).	Combined 1 and 2.	Artisan (Charlestown Ward).	Slums (Trinity Ward).	Combined 3 and 4.
	Group 1.	Group 2.		Group 3.	Group 4.	
BIRTHS .....	429	463	892	530	529	1,059
INFANT DEATHS .....	16	10	26	35	40	75
INFANT MORTALITY RATE.....	37	22	29	66	76	71
NEO-NATAL DEATHS (under 4 weeks)	10	8	18	14	11	25
NEO-NATAL DEATH RATE.....	23	17	20	26	21	24
DEATHS: 1 TO 12 MONTHS.....	6	2	8	21	29	50
DEATH RATE: 1 TO 12 MONTHS.....	14	5	9	40	55	48
PREMATURITY—						
PERCENTAGE OF TOTAL DEATHS...	37.5 (6)	20.0 (2)	30.5 (8)	17.0 (6)	15.0 (6)	16.0 (12)
GASTRO-ENTERITIS—						
PERCENTAGE OF TOTAL DEATHS...	25.0 (4)	— (0)	15.5 (4)	20.0 (7)	32.5 (13)	26.7 (20)
RESPIRATORY—						
PERCENTAGE OF TOTAL DEATHS...	12.5 (2)	20.0 (2)	15.5 (4)	37.0 (13)	25.0 (10)	30.7 (23)
DEATHS (1 to 12 months)—						
PERCENTAGE OF TOTAL DEATHS...	37.5	20.0	30.5	60.0	72.5	66.7

NOTE.—All figures are taken to nearest whole number.

Figures in parentheses (after percentage) give actual number.

## **DAY NURSERIES.**

### **Summerville Road Nursery.**

The number of Day Nurseries in the City was increased to 14 by the opening in May of the Summerville Road Nursery at Irlams-o'th'-Height. This Nursery, which is situated close to the main Bolton Road, can take 50 children from six months to five years of age. In some respects this building is an improvement on the older type of prefabricated huts. It appears to be more spacious and there is better accommodation for the staff.

This Nursery has been affiliated to the National Society of Children's Nurseries.

### **Greengate Nursery.**

In consequence of the return of the Greengate Hospital and Open-air School soon after the cessation of hostilities in Europe, the premises which were occupied by this Day Nursery had to be vacated. The Nursery was therefore closed on July 31st. Some of the children were absorbed into other Nurseries, but most of the mothers had to make other arrangements for their children or had to give up work. It was found possible to absorb four of the staff into other Nurseries.

### **Great Clowes Street Nursery.**

Another consequence of the return of the Greengate Hospital to Salford was that the Salford Nursery School which had found temporary accommodation in the hospital was without a home. With the approval of the Minister of Health the Nursery at Great Clowes Street was transferred to the Education Committee, to be used as a Day Nursery for children aged two to five years, and later as a Nursery School. The children under two from Great Clowes Street were transferred to Wilmur Avenue Nursery which has since been affiliated to the National Society of Children's Nurseries.

### **Meals in Nurseries.**

As a result of the experiment carried out at Hulme Street Nursery it was decided that all meals in the five larger Nurseries should be prepared on the premises. This arrangement has proved highly satisfactory. The meals are more varied and more appetising. It was found impossible to make similar arrangements in the smaller Nurseries owing to the inadequacy of the facilities for cooking and storage of food.

### **Student Nursery Nurses.**

During the year six students were successful in obtaining the Diploma of the National Society of Day Nurseries.

### **Medical Officer's Report.**

Dr. Brown reports that the health of the children attending the day-time Nurseries during the last year has been generally satisfactory. The majority of the children have shown marked physical improvement once they have settled down to their new routine and environment.

There have been no serious epidemics, though it is of interest to note that out of six cases of whooping cough in one Nursery, four cases, including one of a severe nature, occurred in children who had been immunised at 4-6 months previously. There has been during this winter a marked increase in the number of cases of urticaria and of impetigo, in spite of excluding the latter cases from the Nurseries at an early stage.

The number of children suffering from persistent nasal catarrh and from enlarged and diseased tonsils and adenoids remains high. I attribute this fact to the lack of outdoor exercise in the winter months due to conditions pointed out in last year's report, namely, unsuitable clothing and lack of shelter from the elements.

There would not appear to be any improvement in the attitude of the mothers towards taking advantage of the special clinics, particularly with regard to the Dental Clinic.

#### **Attendances.**

The average daily attendance in the Nurseries throughout the year was 69 per cent.

#### **Northern Nurseries Campaign.**

With the coming of peace there was much anxiety on the part of the mothers as to the fate of our War-time Nurseries. A Northern Nurseries Campaign Committee was formed to enquire into the probable need of Day Nurseries in the future, to supplement the proposed provision of Nursery Classes and Nursery Schools. A questionnaire was circulated among mothers whose children were attending Nurseries in the 32 areas. Four thousand, six hundred and sixty replies were received. An analysis of these replies showed that 99·7 per cent. of the mothers considered that Day Nurseries were necessary for the following reasons :—

1. The care of children of widows, unmarried mothers, separated parents, children whose fathers were disabled, sick, or earning an inadequate wage.
2. To take children out of unsuitable homes, or lodgings.
3. To keep children off the roads, and away from the dangers of modern traffic.
4. To obviate the alternative of minders who have proved less efficient and more expensive.
5. To form a good foundation for the child in health and habits.

55·9 per cent. of the mothers were the sole support of their children.

97·5 per cent. of the mothers stated that their children had improved in health, happiness and habits since attending a Nursery.



At the end of October a census of the needs of the mothers bringing their children to Nurseries in Salford was taken with the following results :—

No. of children on registers ..... 667

No. of mothers forced to work :—

(a) Because of husband's low income .....	304	} 467
(b) Because of husband's inability to work .....	27	
(c) Because they are widowed.....	38	
(d) Because they are separated from husbands...	20	
(e) Because they are unmarried.....	78	
No. of children without mothers.....	9	

No. of children of non-working mothers :—

(a) Temporarily accommodated .....	5
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*Reasons :—*

1. Mother's ill-health during pregnancy.
2. Mother recently had thyroidectomy.
3. Mother in hospital with pneumonia.
4. Mother in a Maternity Home.
5. Mother bed-ridden since confinement some weeks ago.

(b) Permanently accommodated .....	5
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*Reasons :—*

1. Mother mentally unsuitable (ex in-patient of Prestwich Institution).
2. Mother left home. Child living with father and aunt who both work.
3. Mother is a permanent semi-invalid.
4. Mother in Nab Top Sanatorium.
5. Mother deceased. Father has tuberculosis and is unable to work.

Since the opening of the first War-time Nursery in Salford in 1941, the service has become increasingly popular and more widely understood and is now a well established section of the Child Welfare Scheme.

Much has been said both for and against children being admitted into Nurseries, but it is felt in Salford that the advantages far outweigh the disadvantages. Instead of breaking up family life, separating parent and child, and encouraging parents to shelve their responsibilities to their children, it has been found that there is an increased attachment between parent and child, because of their varied experiences during the day ; the parent is interested to hear the child's account of all his activities, his contact with other children, and his new experiences.

In few instances has it been found that a parent is using the Nursery as a " dumping ground " for her children. Such cases are quickly found out and the children withdrawn from the register.

The parents' interest in the Nursery routine and ideas has been fostered by parents' Clubs, by tactful and friendly contact with the staff and by the children themselves.

Physically the child can develop much more satisfactorily in a Nursery than in some of the homes of Salford, many of which have few of the amenities of civilisation, have small rooms, and no place for children to play except the street or small backyard.

In the Nursery the child has regular, well-balanced and well-cooked meals ; he has plenty of space for muscular activity ; he is supplied with suitable toys to aid his muscular development. He has regular times for rest and play. He also has regular medical inspections so that any defect can immediately be observed and appropriate treatment given right away.

His social development is encouraged by careful training in good habits, by his contacts with other children and with adults interested with his welfare.

The Nurseries have not become the hotbeds of infection which was prophesied. There have been outbreaks but these have not reached serious proportions, *e.g.*, in Langworthy Nursery soon after it was opened in March, 1942, there was an outbreak of Sonne dysentery—28 cases being reported over a period of 12 days. Most of the cases were mild, lasting from one to seven days. There was one severe case lasting 21 days. There were no further outbreaks of this dysentery in this Nursery until August, 1945, when one member of the staff and one child had an attack of Sonne dysentery.

In July and August, 1943, there were five cases of chickenpox, three from one household. From October to December, 1943, there were 17 cases of measles. In January, 1945, three cases of whooping cough and two cases of measles were reported. In May, 1945, there was one case of scarlet fever.

This Nursery takes in 35 children from 6 months to 5 years of age.

In Hulme Street Nursery, taking 90 children in two units of 50 and 40 respectively, there were between 1943 and the end of this year 10 cases of dysentery (Sonne), 13 cases of measles, five of whooping cough, three of mumps and 17 cases of chickenpox.

Looking back on the Nursery Service we can feel that despite many setbacks, and despite the far from ideal conditions of siting, buildings and equipment, a good foundation has been laid for a permanent social service for the parents and children of the City.

## ALMONER'S REPORT FOR 1945.

### Maternity and Child Welfare and School Medical Services.

During the past year the work of the Almoner's Department has developed and expanded. An office of this kind to which social problems relating to health can be referred, is a comparatively new venture for Public Health Services, and various methods have to be tried to discover the best way of utilising the means available. Generally, the various sections of the Department refer to the Almoner, families which they feel require investigation or assistance. A total of a hundred and twenty-three families were so referred in 1945. Help was required in a variety of ways and a number of families required more than one form of assistance. Convalescence was arranged for twenty-eight school children and for three children below school age. The placing of the responsibility for convalescence upon the Education Authority has assisted considerably. Where previous time was often wasted finding means of meeting the cost, the only waiting now involved is for a vacancy at the Convalescent Home. Two mothers, whose health was impaired and whose children could be cared for in their absence, were sent to the West-hill Convalescent Home at Southport, for rest and recuperation, and grants were obtained to meet the cost. Eight mothers who could not leave their children were sent to Brentwood Recuperation Centre at Marple, and all the families greatly benefited from their stay there. Where possible, grants were obtained and the mothers contributed according to their means. Three patients were helped by the Hospital Savings Associations. Two patients were assisted by the C.O.S. and one family received a grant from the R.A.F. Benevolent Fund. Six families who were in need of a holiday were sent to the Cathedral Home at Mellor. One mother and child were sent to the S.S.A.F.A. Home at St. Fallans. In an endeavour to restore his ability to support his family, one father was sent to Southport, the cost being met by the P.A.C.

The care of children while the mother is in hospital has become an increasing problem. Relatives are often working and are unwilling to take the responsibility. In seven cases where no other alternative was possible, children were admitted to homes, in five instances the P.A.C. accepting the responsibility.

Twelve families were helped to obtain bedding either for confinement or because that which they had was inadequate for the children to get proper rest so necessary for health.

Thirty-five families were helped with clothing. The position regarding this form of assistance was made much easier in October by the gift of a large quantity of clothing from the W.V.S. to be distributed to needy families. However, the problem cannot always be solved in this way, since coupons must be surrendered and the difficulty is frequently not financial but lack of coupons. However, in two instances where coupons had been exhausted due to special circumstances it was possible to get supplementation from the Board of Trade.

Two mothers who, due to ill-health, were unable to give adequate care and attention to their home and children, were assisted in obtaining War Service Grants to pay for domestic help and laundry.



Seventeen families were investigated where medical examination has led the doctor to suspect there may be need or neglect. Home visits in these instances showed that either the matter could receive attention without assistance or was due to lack of proper care rather than financial necessity. The latter families were either followed up or referred to other organisations.

Financial grants totalling £53 0s. 0d. were obtained to help the various families referred. This accounts only for money which passed through the Department and does not cover grants given directly or in kind.

A total of 148 visits were paid.

The following are examples of ways in which families can be helped :—

Mrs. X. had obtained a legal separation from her husband on grounds of cruelty. The allowance she received from him was inadequate to support her and her five children. However, her own health was too poor to go out to work. Arrangements were made for her to go away with the children and financial help was obtained to meet the cost. Assistance was given with clothing. The health of the family greatly improved and on their return home Mrs. X. was helped in getting the two youngest children into a residential nursery, so that she herself was free to work and achieve independence.

M.L. was a girl of eleven who suffered from a crippling defect which made walking difficult. Her mother was in ill-health and would possibly require hospital treatment herself. The care which M. needed and the necessity of taking her backwards and forward to school were an added strain and Mrs. L. had the constant anxiety of wondering what would happen if she should break down. Various residential Cripple Schools were approached and it was eventually possible to obtain a vacancy at one of them. The Education Committee agreed to accept responsibility for the cost of her maintenance there. Assistance was given to the family to obtain the outfit required and they were helped with arrangements for the journey. M. has now settled down well and has the company of children similarly handicapped while her mother has been relieved of the burden which had been contributing to her own ill-health.

Mrs. L. was a woman with six children whose husband was suffering from an incurable disease. She had only her small pension on which to manage the home. A Society was approached which agreed to make a small weekly allowance to get the extras required for the invalid. This was only of short duration as he died within a few weeks. It was then found necessary for Mrs. L. herself to go into hospital for an operation. Arrangements had to be made for the children to go into a home for which the P.A.C. agreed to pay. They were also found to require clothing and help was given in this respect. As it appeared that Mrs. L. would not be in a fit condition to look after her family on her return home, convalescence was recommended and arrangements were made for her to go away from hospital while the children remained in the home. The family were eventually reunited after all benefiting from the change.

Throughout the Department the work aims at being constructive, assisting the patients to help themselves as far as possible. A little help given at the right time can often restore a family to health and independence when otherwise through inability to make the initial effort they may have drifted into the state where self respect is lost and they depend on the help given by the various social organisations. If this can be avoided the family are able to lead a far more satisfactory life and the community is spared the drain on its resources.

## ANNUAL REPORT — IMMUNISATION DEPARTMENT.

During the year ended December, 1945, a special clerical department was opened for dealing with Diphtheria Immunisation. Every method of approach was adopted and no effort spared to convince the parents of the value of immunisation in protecting their children against diphtheria.

Whilst special campaigns are of help in obtaining a large increase in the number of immunised children, it has sometimes been found that a dangerous " slump " has followed such campaigns. It is, therefore, expedient to place greater reliance upon the day to day efforts of the staff of the Health Department.

In some areas immunisation of the unborn infant is discussed in ante-natal clinics ; courses in parent craft, before and after marriage, include reference to it.

Details of the record system are as follows :—

Cards for each individual child are prepared from the list of registered births. From these cards invitations are sent to the parents when the baby is five months old whether or not the consent of the parent has been obtained. An alternative appointment is given if the first proves impossible for the mother. Should the mother fail to respond to two written invitations to attend a clinic for immunisation the reason for non-attendance is entered by the Health Visitor concerned on a special form supplied by and returned to the Immunisation Office. Diphtheria immunisation dosage cards in respect of—

- (a) children for whom consent has been refused ;
- (b) children who for any reason cannot attend a clinic ;
- (c) defaulters ;

are given to the Clinic Nurses who visit at the earliest opportunity and offer immunisation in the home.

Particulars of all immunisations including those done by general practitioners are entered on the child's immunisation card.

The procedure adopted in the Maternity and Child Welfare Department regarding diphtheria immunisation is as follows :—

Immunisation is discussed with the mother at the earliest opportunity, the Health Visitor introducing the subject at her first visit. Further reference is made at each subsequent visit and every endeavour is made, not only to obtain written parental consent to immunisation, but to inculcate a real desire for it.

In order to stimulate the staff to further effort lists were posted on the notice boards in the Health Visitors' rooms showing the success in gaining consents and also the number of completely immunised children on the districts.

Health Visitors record the particulars of completed immunisations on their cards and affix coloured metal signals to the card of any child not immunised.

In cases where a child has entered school without being immunised the teaching staff have opportunities to further the campaign. They contact parents at decisive moments in the child's life, *e.g.*, at enrolment and their influence has been most valuable.

As a propaganda device a Schools' Star System was introduced. A list of names of children is hung in the classroom and a red star affixed against the child's name after the first injection and replaced by a gold star after the final injection.

The help given by leaders of religious bodies was effective in many areas.



## HOPE HOSPITAL.

### Report of the Medical Superintendent for the year 1945.

#### General.

The cessation of hostilities failed to make any material impression on the general trend of the activities of the hospital during the year. As in previous war years, the hospital was mainly engaged in civilian work, not only for the population of Salford, but also for that of the surrounding areas which had been previously served by Park Hospital, Davyhulme. No significant increases in bed accommodation were made during the year, but all the available beds were fully utilised. Nevertheless, throughout the year it was found necessary to continue the restriction and delaying of admissions by means of the deferred list and the waiting list, the former being used for cases referred for admission by outside medical practitioners, whilst the latter was used for cases which had been examined in the out-patient department of the hospital and whose admission had been advised. Although every endeavour was made to admit all urgent cases, many patients, who had been recommended to come in, were unable to gain admission owing to lack of beds. In addition to this, a steady stream of applicants for the maternity department had to be turned away during the year and the restriction of admissions of these cases had to be applied even more stringently than in the past. The problem, however, is not merely a question of lack of beds, but is linked up closely with staff shortages. But it is a pitiful reflection on the service provided that, patients recommended for hospital, are lying ill at home and even dying at home before a bed becomes available. That a similar situation exists in many other parts of the country, perhaps to an even greater extent, does not alter the gravity and tragic seriousness of the problem.

Shortage of staff has continued to provide the most serious handicap to the hospital, and has imperilled the efficiency of every department at various periods during the year. The most serious defect was undoubtedly in relation to domestic staff, especially in the catering departments. A complete breakdown, threatened by shortage of kitchen staff, was only averted in both the hospital and nurses' home kitchen by senior members of the nursing staff undertaking domestic duties, which often were not merely limited to supervision and direction. Although these duties were shouldered cheerfully and loyally, it meant a diversion of skilled nursing staff from their own responsible work to domestic duties, with a consequent strain on the efficiency of the nursing service. Practically all other sections of the hospital staff were reduced from time to time—especially the nursing, general, domestic and medical staffs—and all were seriously handicapped on various occasions.

This situation was aggravated by absence due to sickness, of which there was a high incidence throughout the year, coupled with the inexorable and mounting pressure of work, which failed to relax materially even during the

usually relatively inactive month of August. But the hospital continued to function, and it was never compelled to have recourse to the closure of beds, though at times the threat appeared very near and real.

The need for adequate accommodation to replace that lost by enemy action became even more manifest and urgent during the year. Lack of satisfactory office accommodation to house the growing needs of the hospital, combined with the increase in administrative and office staff and also the new developments in the hospital organisation, put a severe strain on the hospital and undoubtedly had an adverse effect on the quality of the work done. In addition, room had to be found for the new hospital claims department and some provision made for the new activities introduced during the year, *e.g.*, rehabilitation and occupational therapy. It has now become obvious that the temporary emergency arrangements which were made in 1941 following the total loss of all the administrative offices and stores will no longer suffice for the growing needs of the hospital and, with the imminent loss of the accommodation available in the Old People's Homes, the problem has become one of considerable urgency. Although the temporary huts provided for the hospital stores were opened up during the year, it was soon apparent that, as had been anticipated, they were utterly insufficient to meet the whole necessary requirements, and that further space was needed. This question of accommodation is likely to present considerable and serious difficulties which would have occurred in any event, but have been aggravated by the very substantial loss of accommodation sustained as a result of enemy action.

#### Emergency Medical Service.

In October the beds reserved for Emergency Medical Service cases were reduced from 120 to 50, but prior to that, permission has been sought and obtained to use, for civilian purposes, such of these beds as were unoccupied temporarily. Three hundred and four patients were admitted to the Emergency Medical Service beds, mainly in small groups or as individual cases from abroad ; the remainder were admitted from other hospitals or as emergency cases from the neighbourhood.

Emergency Medical Service admissions :—

Service patients .....	249
Civilians (Merchant Navy, Police, etc.) .....	45
Prisoners of war.....	10
	—
	304
	—

#### Medical Staff.

The situation in regard to resident medical staff remained unaltered during the year. The appointment of two additional visiting anæsthetists gave a measure of relief for two sessions each week, but the junior medical officers still gave 2,286 anæsthetics, compared with 2,392 in the previous year. Sickness in the



junior medical staff accounted for the loss of 95 days. Ten people acted as *locum* medical officers on 16 occasions for a total of 268 days. When possible, a senior medical student was employed to relieve and help the junior medical staff. They helped to take something of the strain off the medical staff at various times, and even acted as *locum* medical officers on occasions. Twelve students were employed during the year on 15 occasions for a total of 369 days. Six junior medical officers ceased duty during the year and six commenced duty.

*Ceased duty :—*

Dr. Majdalany .....	31st January, 1945.
Dr. Martin .....	24th April, 1945.
Dr. Power .....	29th April, 1945.
Dr. Cranna .....	9th July, 1945.
Dr. Talbot .....	13th October, 1945.
Dr. Winstanley .....	13th November, 1945.

*Commenced duty :—*

Dr. Talbot .....	13th April, 1945.
Dr. Harrison .....	13th April, 1945.
Dr. Boydell.....	7th May, 1945.
Dr. Ferguson .....	22nd July, 1945.
Dr. Hedley .....	15th October, 1945.
Dr. Elliott .....	29th October, 1945.

The visiting staff was augmented during the year by the appointment of Dr. Faulkner as ophthalmologist. In addition to continuing the squint operations, which he had been doing for school children since 1941, Dr. Faulkner was able to have a weekly eye clinic and also see such cases in the hospital as required his services. The development of this new service was handicapped by lack of equipment which, though ordered, was a long time in coming, but, when it is in full operation, it will be of great use, and will help to fill a long felt need in the hospital. Dr. Kupfermann and Dr. Sneddon were appointed as visiting anæsthetists in March, and Dr. Nash replaced Dr. Gall as visiting anæsthetist in July. Dr. Parkinson was appointed as visiting physician but, owing to his military service, he was not able to commence duty in 1945.

The Staff Medical Society continued its meetings regularly and in October an open clinical meeting was held to which outside medical practitioners were invited. A varied and interesting series of cases was demonstrated by members of the medical staff. It is hoped to repeat this meeting annually as it affords a most useful and pleasant link between outside medical practitioners and the hospital medical staff. During the summer vacation, a number of senior medical students, attended the hospital clinics and later in the year, post-graduate demonstrations were given for demobilised medical officers, as part of the scheme of refresher courses organised by the Manchester Medical School.



A most encouraging and stimulating feature of the year's medical activity was a number of papers published in the medical press by members of the medical staff, as follows :—

1. " Post-operative Cutaneous Gangrene "—by Mr. C. Grimshaw and Dr. L. Stent—*Lancet*, April, 1945.
2. "Extragenital Chorion Epithelioma," by Dr. Resnick, *Journal of Obstetrics and Gynaecology*, British Empire, April, 1945.
3. " Epidemic Diarrhoea and Vomiting," by Mr. Brown, Dr. Crawford and Dr. Stent, *British Medical Journal*, October, 1945.
4. " A case of Sympus Dipus," by Dr. Resnick, *Journal of Obstetrics and Gynaecology*, British Empire, October, 1945.
5. " Spinal Analgesia in Operative Obstetrics," by Dr. Resnick, *British Medical Journal*, November, 1945.

Dr. Donovan is to be congratulated on passing the examination for the Diploma of the Royal College of Obstetricians and Gynæcology in October, 1945.

#### Nursing Staff.

Miss Jenkins ceased duty as Matron in May and was succeeded by Miss Martin. New standards of staffing, associated with improvements in conditions of service, have not yet brought any substantial relief in the difficulties which arise in connection with the nursing of our patients. These difficulties are so closely linked with the question of domestic organisation, that the disastrous shortage of domestic staff has had, throughout the year, a most adverse effect on the general nursing situation. The hospital has been fortunate enough to maintain fairly its numbers of nurses but the benefit has been vitiated by the lack of adequate domestic staff and the demands made by the increasingly specialised and technical aspects of the nurses' training. The administration of the nurses' training school requires meticulous and detailed organisation, which has to be accommodated at all times to the requirements of the wards. The nurse must get a balanced and adequate training, whilst the patient must get efficient and proper treatment. Further increases in the nursing staff establishment will be necessary to meet the exacting demands of the future, but limitations are imposed by the amount of room available in the Nurses' Home. Consideration must also be given in the near future towards improving the conditions in the Nurses' Home, and bringing them into line with proper and adequate standards, as recommended by the Ministry of Health and Ministry of Labour and National Service, in their pamphlet on " Staffing of Hospitals," 1945.

#### Nurses' Sick Bay.

Early in the year, Ward H.3 was allocated as a nurses' sick bay and six beds were provided temporarily in the dayroom whilst reconstruction was carried out in the ward. By the end of the year, this ward had filled a most useful purpose but was not yet ready for complete occupation. A daily staff clinic, taken by the Medical Superintendent, was held in the ward. There were 2,062 attendances, 1,724 from members of the nursing staff and 338 from other staff. Sickness during the year provided a very substantial burden on the nursing staff, accounting for the loss of 3,545 days. Two hundred and eighty-

eight days were lost by the domestic staff as a result of sickness. Apart from three cases of pulmonary tuberculosis which accounted for the loss of 725 days, the chief casual factors in the sickness of the nursing staff were :—

Influenza and colds.....	531 days.
Tonsillitis.....	325 „
Epidemic diarrhœa ....	272 „

These were all relatively short term cases, but four long term cases, each off duty for several months, have been largely responsible for pushing up the figures for this year. This question of loss of time through sickness is being given the most anxious consideration, as it puts a most severe strain on the whole nursing administration.

### Infection.

Infectious diseases occurring in the hospital were reduced during the year. Once again dysentery proved to be our greatest problem and it was not always possible to arrange the transfer of these cases to Ladywell Hospital, owing to shortage of beds there. This usually occurred when there was a sharp outburst in one of our wards with a sudden flood of cases. The dysentery carrier is the root of this problem ; admitted with some other condition and very difficult to recognise until a number of cases have arisen. The table below shows the incidence of these infectious diseases in the various wards. Throughout the year there occurred a large number of cases of epidemic diarrhœa in various wards and amongst the nursing staff. On investigation, it was found that this was a manifestation of a situation existing in the general community and that similar outbreaks were arising elsewhere in the country. An outbreak of neonatal diarrhœa occurred in the maternity department in the early part of the year, but was soon checked by the usual measures, closure of wards, etc.

TABLE OF INFECTIONS.

	Total Cases.	Ward G3.	Ward H2.	Ward SA5a.	Ward SA5b.	Other Wards.	Staff.
Diphtheria....	6	1	3	—	1	—	1
Whooping Cough .....	1	—	—	—	1	—	—
Scarlet Fever	6	1	1	3	—	—	1
Measles .....	24	3	7	1	6	7	—
German Measles	1	—	—	1	—	—	—
Chickenpox...	5	4	1	—	—	—	—
Mumps.....	—	—	—	—	—	—	—
Total							
Dysentery	51	—	17	—	4	28	2
(Sonne) .....	(45)	—	(12)	—	(4)	(28)	(1)
(Flexner) ...	(4)	—	(4)	—	—	—	—
(Newcastle)	(2)	—	(1)	—	—	—	(1)
TOTAL ...	94	9	29	5	12	35	4

G3, H2, SA5a, SA5b are children's wards.

“ Other wards ” includes SA3x, provided for destitute children.

### Destitute Children.

Ward SA3x continued to admit destitute children till October when the Public Assistance Committee was able to make provision for them elsewhere. Ninety destitute children were accommodated in the hospital during the year, but a number of these cases were also in receipt of medical treatment for various minor ailments, mainly skin diseases. In future there should be no need to admit healthy destitute children. An occasional difficulty will arise in the case of a child whose mother has to be admitted to the hospital for treatment, and for whose care it has not been possible to make suitable arrangements. Often, only a brief period of time is required before arrangements can be made, but if the mother is acutely ill and urgent admission is necessary, the disposal of the child will present a problem, especially during the night. It is not possible to refuse the admission of a destitute child under such circumstances—arguments as to the responsibility for the care of the child must be deferred till later. In addition, provision must be made for the admission of breast fed children whose mothers require to be taken into hospital for treatment, but who can still continue breast feeding.

### NEW ACTIVITIES.

#### Rehabilitation.

A gymnastic instructor was appointed in April in connection with the development of the rehabilitation department. The large dining room in the Old People's Homes was equipped as a gymnasium and regular classes were held there daily. This proved most adequate and satisfactory, but the out-patient attendances were rather disappointing, especially for the women, and the classes remained small. Domestic duties and family responsibilities which operate more severely and more urgently in the case of women, were no doubt responsible for this situation. Ward group exercises were instituted more widely and effectively, and appeared to offer the most encouraging field for this new activity. The appended list shows the volume of work done during the nine months of the year :—

#### Exercises in the Hall :—

Number of new in-patients.....	15
Number of new out-patients .....	227
Number of treatments—in-patients .....	68
Number of treatments—out-patients .....	1,485
<hr/>	
Total treatments .....	1,553

#### Exercises in Wards :—

A.1 .....	2,673
A.2 .....	2,715
A.3 .....	3,134
B.3 (ante-natal ward, commenced October) ...	1,028
N.E.1 .....	2,681
N.E.2 .....	1,376
N.W.2 .....	3,137
N.W.3 .....	4,405
<hr/>	
	21,149
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Arrangements were made in September for two students from the Salford Royal Hospital School of Physiotherapy to attend at the maternity wards for instruction in post-natal exercises. This association has worked most harmoniously.

### Occupational Therapy.

An occupational therapist was appointed and commenced duty towards the end of September. Lack of suitable accommodation and equipment, along with the very wide field to be covered, necessitated the concentration of the work on certain wards; this work was chiefly diversional and practically confined to bed patients. Lack of equipment and of materials, as well as staff, also imposed limitations but there is no doubt that a long felt want is being met and the response of the patients is enthusiastic and encouraging. An average of 50 bed patients are allocated work each week under the supervision of the occupational therapist in the following wards :—B.2, F.2, N.W.2, N.E.2, S.A.2. The chief crafts are embroidery, leather work (handbags, moccasins, etc.), felt toys, and string belts. Rug wool is only obtained for the military patients and even so, the supply just meets the demand. During the last three months of the year the following articles were made :—

Felt toys.....	372
Leather articles.....	82
Embroidery.....	91
Rugs.....	16
Scarves.....	17
String work, etc. ....	11
	—
	589
	—

### Other Departments.

The Flying Squad continued to operate though still on a restricted scale. It was called out on seven occasions, twice during the night and five times during the day. A most regrettable feature was the fact that on three occasions it was unable to respond to calls because the medical officer was held up by his hospital duties. This refusal only operates when the medical officer has a case in hospital which requires his attention and there is no doubt that this shortage of medical personnel forms the most serious inhibition on the development of this very valuable service. This could be materially relieved by the appointment of an additional obstetrical officer and it is hoped that this will be done in the near future.

The Breast Feeding Clinic continued to do good work. The number of mothers attending increased to 131, though the total attendances fell short of the previous year's figures and averaged 4.5 attendances per mother, compared with 6.01 per mother for 1944. It is still felt that more work could be under-

taken by this service and that full advantage is not being taken of the facilities offered. The figures are shown below :—

	1944.	1945.
Number of attendances .....	637	602
Number of mothers .....	106	131
Average attendances per mother .....	6.01	4.5
Results :		
Fully breast fed babies.....	63 (59%)	76 (58%)
Partially breast fed .....	39 (36.3%)	50 (38.2%)
Artificially fed babies.....	4 (3.7%)	5 (3.8%)

The premature baby ward established on ward B.2x. did useful work. Twenty-seven premature babies were admitted of whom seven died, compared with 20 babies and eight deaths in 1944. The accommodation and facilities are not ideal but they do represent an advance on what was hitherto available.

The Hospital School admitted 458 children in 1945, compared with 249 in 1944. This increase in children led to the appointment of an additional teacher by the Education Committee and has made it possible for every child between the ages of 2 and 16 years to have the benefit of a trained teacher to direct and sustain its interests and activities. There has been a reduction in the number of long term orthopædic cases, the majority of the long term cases being treated for rheumatism, but children admitted for short periods also receive the attentions of the school staff and benefit enormously as a consequence.

The Hospital Library Service under the direction of Mrs. Spence has continued to expand and issued 14,803 books, a substantial advance on the figure of 7,715 for the previous year. This reflects the greatest credit on the librarian and her band of voluntary helpers. It is their energy, enthusiasm and devoted service which has enabled the library to flourish and expand, to the benefit of the patients. Book losses, which are substantial, present a difficult problem in this encouraging picture.

In July arrangements were made for a series of educational talks and discussions to be provided for the long term orthopædic cases in ward S.A.2. This task was undertaken by Mr. Murray and Mr. Sinclair who organised a regular series of talks over a very varied and diverse field. These talks proved most stimulating and interesting and were much appreciated by the patients concerned. Our grateful thanks are due to these gentlemen and their group of speakers who took so much trouble in providing this service.

It is not possible to paint an adequate and comprehensive picture of the work of the hospital in a report, limited by considerations of space, but the hospital has had a very full and busy year and has again topped new high records in certain activities, number of operations, X-ray examinations, out-patient attendances and consultations, etc. But there is a limit to what can be done under existing conditions. No attempt, other than the provision of



temporary and inadequate stores, has been made to replace the large amount of accommodation lost through enemy action. The occupancy of the Old People's Homes was already being threatened towards the close of the year and it has become apparent that unless additional building accommodation is made available soon, the hospital will only be able to continue functioning by the sacrifice of a very large number of beds. Whether a reduced number of beds will meet the needs of a reduced and dwindling local population, only time will show, but there is no evidence at present to suggest that the medical needs and demands of the community will be appreciably reduced in the near future.

The time has clearly come when a decision must be made as it is no longer possible to continue improvising and contriving and still produce a standard of service of which we can feel proud. In the immediate future many serious problems confronts us, in addition to that of accommodation for various departments. The catering organisation will require overhauling with additional staff, equipment and kitchens. The Nurses' Home needs attention—already a scheme is under consideration for the installation of adequate and much needed heating facilities. All departments are clamouring for more space, the physiotherapy department, pathological laboratory, X-ray department, dispensary and theatres. The nursing staff and domestic staff, the clerical and administrative staff, the general and the medical staff all have their needs which demand attention. Behind every consideration must be the thought of the efficiency of the hospital in its attempt to meet the needs of the patients. The hospital itself is an old building but still capable of undertaking useful and worth-while work if it is brought up to date. Yet some of our patients are still housed in unplastered wards with walls of painted brickwork. What has been done during the war with an unprepossessing and dismal ward like H.2 by plastering and painting and fixing the floor, and later with wards H.3 and F.1 can surely be done in peace with the remainder of our old wards.

In presenting this record of the year's work, it is a great pleasure to express my appreciation and thanks to all members of the staff for their work during the year. Their reward lies in the reputation which the hospital has achieved and maintained in the community, and their year's work has done much to enhance this reputation. An effective and harmonious co-operation has continued with the Medical Officer of Health and his staff of the Health Department, and has ensured the closest integration of the hospital in the general pattern of the health service of the City of Salford.

#### **Medical Department.**

Staff—Dr. W. Mackay, Physician.

Assistant Medical Officers allocated to the Medical Wards.

Miss N. C. Rogers, Visiting Electrocardiographer.

Dr. Mackay reports as follows :—

*General Work.*—The number of patients requiring investigation and treatment continued to be high, and the wards were unusually full; indeed, during busy periods, accommodation had to be found for patients in other wards.



Sixty-one cases of acute primary pneumonia were admitted during the year, and five cases of meningococcal meningitis were treated in the hospital. Sulphamezathine continued to be used with satisfaction in the treatment of lobar pneumonia and meningococcal meningitis. Penicillin was used occasionally in the treatment of pneumonia not responding to sulphamezathine. It was also used, and with encouraging success, in the treatment of a few patients suffering from bacterial endocarditis. Six cases of tuberculous meningitis were admitted to hospital during the year, and one case of malaria was diagnosed and treated.

The electrocardiograph as an aid to diagnosis in the investigation of cardiac muscle function continued to be of great help. Reports on 571 electrocardiographic tracings were made during the year.

*Pulmonary Tuberculosis.*—The total number of new cases diagnosed during the year was 18. Another 12 known cases of pulmonary tuberculosis were admitted to hospital; all these patients were brought to the notice of the Senior Tuberculosis Officer at his weekly visits, and arrangements made to enable him to take them directly under his care. Certain pulmonary cases attending the Municipal Chest Clinic were admitted to hospital as occasion arose for special forms of investigation and treatment.

*General Medical Clinic.*—The work in this clinic continued to increase. New patients numbering 970 were sent by their private medical attendants for help in diagnosis, for investigation, or for specialised treatment. There were 1,249 return attendances by old patients.

*The Diabetic Clinic* was attended by an average of 88 patients per month. The total number of attendances during the year was 1,056. New cases numbered 34. Protamin zinc insulin alone or combined with soluble insulin, continued to be used in the treatment of all new cases of diabetes mellitus.

*Special Investigation Clinic.*—This clinic was attended by 77 children, 73 of whom attended for the first time. Each child presented some medical problem. All were examined and investigated, and reports, with recommendations, sent to the School Medical Officer or the Maternity and Child Welfare Officer concerned.

*Medical Out-patients :—*

	1943.	1944.	1945.
New patients .....	905	975	970
Old patients .....	1,427	1,315	1,254
Diabetic clinic.....	900	975	1,056
Special investigation clinic ...	112	118	77
	<hr/>	<hr/>	<hr/>
	3,344	3,383	3,357
	<hr/>	<hr/>	<hr/>

*Infectious diseases notified :—*

Typhoid .....	—	—	1
Diphtheria.....	17	14	1
Scarlet fever .....	—	1	3
Erysipelas .....	3	—	2
Pulmonary tuberculosis .....	48	26	18
Tuberculous meningitis.....	6	6	6
Tuberculosis (other forms) ...	35	27	11
Meningococcal meningitis.....	8	4	5
Pneumonia .....	108	85	61
Acute poliomyelitis .....	—	1	1
Malaria.....	6	3	1
Pemphigus .....	—	—	—
Dysentery .....	63	31	26
Measles.....	26	12	13
Whooping cough .....	4	7	1
Ophthalmia neonatorum .....	—	—	3
	—	—	—
	322	237	153
	—	—	—
Electrocardiograms.....	526	542	571

**Surgical Department.**

General—Mr. Brown, Surgeon.

Mr. Grimshaw, Surgeon.

Miss Mills, Visiting Surgeon.

Orthopædic—Mr. Milner, Visiting Surgeon.

Ear, Nose and Throat—Mr. McKelvie, Visiting Surgeon.

Mr. Grimshaw reports as follows :—

The total number of operations performed in the theatre in 1945 was 3,946 and indicates that the outbreak of peace has so far brought no decrease in the volume of work done. Nor is it likely that this will happen for rising totals are not the only indication of surgical activities. On one surgical ward at least a smaller number of patients have been attending than for many years past, but all concerned are agreed that it has been the hardest year's work in memory. Shortage of staff is partly contributory but the large number of elderly patients with acute surgical conditions requiring especially detailed attention is chiefly responsible. This factor, and the ever increasing scope of surgical intervention, are unlikely to allow any decline in our activities.

Of subjects mentioned in earlier reports it is satisfactory to note developments continuing. The service for hare-lip and cleft palate is now established and the grafting of patients with denuded skin areas is a frequent operation, one lady of 73 having been recently operated on following extensive burns of the leg.

A consideration which frequently gives rise to difficulties is the disposal of patients who having completed their term of hospital treatment have only an unsatisfactory environment to return to or even no home at all. It is of wider concern than purely surgical consideration but it does entail patients being kept in hospital for convalescence or for lack of means of disposal and naturally detracts from the attention that can be given to the more acutely ill without providing the right environment for the convalescent patients themselves.

The operations were as follows :—

(Full-time staff)—

Medical Superintendent—Mr. Brown .....	350
Full-time Surgeon—Mr. Grimshaw.....	784
Obstetrician and Gynæcologist—Dr. Resnick .....	437
Assistant R.O.O.—Dr. Donovan.....	263
Assistant Medical Officers .....	590
	<hr/>
	2,424

(Visiting staff)—

Miss Mills, General Surgeon .....	174
Mr. Milner, Orthopædic Surgeon .....	114
Dr. Rickards, Gynæcologist .....	228
Mr. McKelvie, Aural Surgeon.....	826
Dr. Faulkner, Eye Surgeon .....	59
Mr. Pollitt, Dental Surgeon .....	104
Other Visiting Surgeons .....	17
	<hr/>
	1,522

The anæsthetics were as follows :—

	1943.	1944.	1945.
General (chloroform, ether, gas and oxygen).....	1,917	1,603	1,464
Spinal.....	973	1,090	1,098
Intravenous anæsthesia.....	502	624	746
Local .....	310	312	578
Others (twilight, avertin).....	90	51	60
	<hr/>	<hr/>	<hr/>
	3,792	3,680	3,946

The anæsthetics were distributed as follows :—

Dr. Ghosh .....	413
Dr. Gall.....	272
Dr. Nash.....	139
Dr. Kupfermann .....	96
Dr. Sneddon .....	188
Surgeons .....	552
Assistant Medical Officers .....	2,286
	<hr/>
	3,946



*Orthopaedic Department :—*

	1943.	1944.	1945.
In-patients :			
New admissions .....	320	532	384
Discharges .....	289	461	370
Deaths .....	18	9	15
Out-patients :			
Attendances .....	1,479	1,373	1,622
Patients treated in plaster room....	2,206	2,029	2,114
Anæsthetics administered in plaster room.....	158	159	136

*Ear, Nose and Throat Department :—*

Ward patients.....	48	52	50
New patients .....	543	708	602
Old patients .....	1,312	1,198	1,124
	<hr/>	<hr/>	<hr/>
	1,903	1,958	1,776
	<hr/>	<hr/>	<hr/>
Operations performed .....	1,099	800	826

**Total number of operations performed ..... 3,946**

<i>Head and Neck.</i>	1. Lips, face, mouth and jaws .....	15
	2. Tongue and salivary glands .....	9
	3. Skull and scalp .....	4
	4. Intracranial operations.....	2
	5. Tuberculous glands, neck.....	4
	6. Neck—other conditions .....	34
	7. Thyroid .....	21
<i>Ear, Nose and Throat.</i>	8. Tonsils and adenoids (guillotine).....	709
	9. Tonsil dissection.....	27
	10. Diathermy of tonsils .....	9
	11. Nose and paranasal sinuses.....	52
	12. Mastoid .....	18
	13. External ear, paracentesis, etc. ....	6
	14. Fauces, pharynx and larynx .....	2
	15. Bronchoscopy and œsophagoscopy .....	8
<i>Eyes.</i>	16. Eyes .....	59
<i>Teeth.</i>	17. Teeth .....	116
<i>Stomach and Duodenum.</i>	18. Partial gastrectomy .....	53
	19. Gastroenterostomy.....	5
	20. Toilet and suture perforations .....	26
	21. Ligation and other operations .....	13
	22. Gastroscopy .....	23

<i>Small Intestine.</i>	23. Small intestine (other than duct herniæ).....	18
<i>Colon, Rectum and Anus.</i>	24. Colostomy and cæcostomy .....	19
	25. Resection and ileo-transverse colostomy (anastomosis) .....	18
	26. Abdomino-perineal and perineal resection of rectum .....	2
	27. Prolapse, hæmorrhoids, fissure, sigmoidoscopy.....	97
	28. Abscesses, ischio-rectal and perianal, fistulæ .....	32
	29. Other operations (closure of colostomy, etc.).....	22
	30. Sacrococcygeal cyst .....	7
<i>Appendix.</i>	31. Acute appendices .....	142
	32. Interval appendices .....	134
<i>Laparotomy.</i>	33. Laparotomy—exploratory only .....	49
<i>Gall Bladder.</i>	34. Cholecystectomy, cholecystostomy and cholodochostomy.....	39
	35. Cholocystgastroenterostomy .....	3
<i>Pancreas.</i>	36. Pancreas.....	—
<i>Spleen.</i>	37. Spleen .....	2
	38. Liver .....	—
<i>Peritoneum and Mesentery.</i>	39. Peritoneum and mesentery (cysts, subphrenic abscess, peritonitis, appendix abscess, etc.)...	39
<i>Herniæ.</i>	40. Inguinal herniæ .....	138
	41. Femoral herniæ .....	61
	42. Umbilical herniæ .....	41
	43. Ventral and incisional herniæ .....	16
	44. Other herniæ .....	7
<i>Blood Vessels.</i>	45. Embolectomy .....	1
	46. Varicose veins.....	47
<i>Kidney and Ureters.</i>	47. Nephrectomy .....	3
	48. Nephro- and uretero-lithotomy .....	4
	49. Nephro- and uretero-stomy.....	—
	50. Perinephric abscess .....	3
	51. Other operations on kidney and ureter .....	2
<i>Bladder.</i>	52. Suprapubic cystotomy .....	25
	53. Cystoscopy (including diathermy) .....	58
	54. Other S.P. operations (lithotomy, etc.) .....	4
<i>Prostate.</i>	55. Suprapubic prostatectomy, etc. ....	20
	56. Other prostate operations .....	—
<i>Urine, Penis and Scrotum.</i>	57. Bougies.....	26
	58. Circumcision .....	122
	59. Other operations on urethra, penis and scrotum...	13
<i>Testes.</i>	60. Orchidopexy .....	1
	61. Hydrocele and varicocele .....	19
	62. Orchidectomy, epididymectomy .....	2

<i>Gynaecology.</i>	63. Vulval neoplasms .....	5
	64. Plastic repairs and operations (perineum, vagina, etc.) .....	103
	65. Hysterectomy.....	104
	66. Hysterotomy .....	10
	67. Myomectomy .....	4
	68. Cæsarean section .....	39
	69. Dilatation and curettage.....	546
	70. Ventrifixation, etc. ....	6
	71. Salpingectomy and ectopics .....	15
	72. Ovariectomy and oophorectomy, alone.....	28
	73. Tubo-ovarian abscess .....	3
	74. Minor gynæcological operations .....	94
<i>Orthopaedic.</i>	75. Spinal cord.....	2
	76. Vertebral column .....	1
	77. Amputation, arms.....	1
	78. Amputation, legs.....	1
	79. Amputation, digits .....	13
	80. Fractures and dislocations, manipulations and open reductions .....	11
	81. Plastic bone operations, knock-knee, hammer toe, etc. ....	20
	82. Acute and chronic osteomyelitis, sequestrectomy..	22
	83. Lumbar and other sympathectomies.....	2
	84. Joints—cartilages .....	20
	85. Tendons and nerves .....	9
	86. Torticollis.....	9
	87. Smith Peterson pins.....	5
	88. Gun shot wounds and foreign bodies .....	14
	89. Manipulation and plaster .....	20
	90. Wounds and burns .....	8
<i>Skin.</i>	91. Abscesses.....	107
	92. Plastic.....	12
	93. Growths and cysts .....	77
<i>Breast.</i>	94. Radical mastectomy.....	11
	95. Other breast operations, abscesses, simple amputa- tions.....	59
<i>Chest.</i>	96. Empyema drainage.....	30
	97. Phrenic evulsion .....	2
<i>Miscellaneous.</i>	98. Miscellaneous operations .....	83
		<hr/>
		3,946
		<hr/>



### Obstetrical and Gynaecological Department.

Obstetrician and Gynæcologist, Dr. Resnick.

Assistant Resident Obstetrical Officer, Dr. Donovan.

Visiting Obstetrician and Gynæcologist, Dr. Rickards.

Dr. Resnick reports as follows :—

As in the previous year, 1945 has seen a maintained demand for hospital confinement. Although the number of deliveries has decreased slightly, attendances at the ante-natal clinic have been as high as ever, stretching the accommodation to its maximum. This decrease in the number of confinements may be explained by the fact that there has been a definite decrease in the number of patients booked from the Lancashire County Council. However, an increasing number of Salford multiparous women, without adequate facilities for home confinement and desiring hospital confinements, are being booked at the ante-natal clinic. It has been suggested that the numbers of deliveries in hospital will diminish when Park Hospital, Davyhulme, is reopened for midwifery patients. This decrease will, I am sure, be compensated for by an increased admission of Salford residents who would previously have had their children at home owing to a shortage of accommodation in hospital.

There has been a marked decrease in the infant and maternal mortality, as can be seen from the figures given below. Several factors are responsible for this improvement :—

1. An adequate trained nursing staff.
2. Non-overcrowding of the nurseries (reconstructed and more adequate on A.1 ward).
3. As a result a remarkable decrease in the outbreaks of infection among the infants.

Particularly noticeable, and pleasing are the results obtained with the premature infants, in my opinion due mainly to a well-trained and adequate nursing staff with suitable facilities for such nursing. Of 151 premature infants under 5½ lbs. weight, 21 of whom were under 3 lbs., only 43 died. These are indeed good results which can only be maintained with adequate well-trained nursing staff, and even improved by the allocation of more room for nurseries (particularly for premature babies), at times when the main nurseries are full.

The flying squad emergency service has not lived up to its earlier expectations during 1945, owing to inadequacy of medical personnel. The danger of leaving the maternity wards unattended during calls from outside the hospital, will, I am sure, be overcome by the proposed election of a third member to the midwifery medical staff in 1946.

On December 11th, a three-hour post-graduate course on "Modern Obstetrics" was given to doctors who had recently been demobbed.

In conclusion I wish to thank all members of the medical staff, both Hope Hospital and Regent Road, for all their help and co-operation in the smooth running of the maternity department during my tenure as Obstetrician and Gynæcologist for the past 3½ years.

	1944.	1945.
Attendances at the ante-natal clinic .....	11,973	11,839
Individual attendances .....	1,598	1,552
Admissions to the lying-in wards .....	1,486	1,438
Admissions to the ante-natal ward.....	662	582
(No. of non-Salford residents, 206).		
Booked cases .....	1,293	1,252
Emergency cases.....	193	186
Normal deliveries.....	1,136	1,204
Abnormal deliveries .....	350	241
(i) Forceps extractions .....	177	143
Maternal mortality.....	1	
Stillbirths.....	2	
Neo-natal deaths.....	4	
(ii) Cæsarean sections .....	86	43
Maternal mortality.....	Nil.	
Stillbirths.....	1	
Neo-natal deaths.....	6	
(NOTE.—During the past 3½ years not a single maternal death has occurred in patients undergoing Cæsarean section).		
(iii) Breech deliveries .....	62	42
Maternal mortality.....	Nil.	
Stillbirths.....	2	
Neo-natal deaths.....	4	
(iv) Face presentations.....	—	5
(v) Shoulder presentations .....	—	8
Puerperal pyrexia .....	22	21
MATERNAL DEATHS .....	7	6
Stillbirths (Stillbirth rate 37/1,000).....	80	55
Neo-natal deaths (Neo-natal death rate 44/1,000) .....	59	60
Number of premature infants (under 5½ lbs.).....	—	143
Number of premature infants (under 3 lbs.) .....	—	21
Number of premature infant deaths .....	—	43

#### Causes of Maternal Deaths.

- (i) Normal delivery. Post-partum hæmorrhage. Obstetric shock.
- (ii) Concealed accidental hæmorrhage. Terminal uræmia.
- (iii) Concealed accidental hæmorrhage. Severe oliguria.

- (iv) Toxæmia of pregnancy. Gross hydramnios. Urinary infection.  
Died seven hours after artificial rupture of membranes.
- (v) Congenital heart lesion. Marked decompensation. Low forceps  
extraction. Died after three days. Heart failure.
- (vi) Uræmia. Acute pyelonephritis. Six and a half months' pregnancy  
terminated.

<i>G.2 Ward (Isolation and Minor Gynaecological) :—</i>	1944.	1945.
Total admissions .....	642	750
No. of abortions.....	383	343
(i) Threatened.....	68 (28 becoming inevitable).	
(ii) Inevitable.....	113	
(iii) Incomplete.....	136	
(iv) Complete.....	10	
(v) Incomplete (septic) .....	14	
(vi) Tubal .....	2	
No. of abortions requiring operation .....	319	328
Miscellaneous cases .....	—	372
No. of cases of puerperal pyrexia.....	22	21
No. of deaths on G.2 (excluding obstetrical cases) .....	4	1

#### Cause of Death.

Septic abortion. Multiple lung abscesses.

(NOTE : One case on N.W.4 ward died soon after admission due to septi-  
cæmia. Post-mortem disclosed ? retained products of conception.)

#### Gynaecological Department.

The tempo of work in this department has not slackened, as with the  
obstetrical department. Attendances at the gynæcological clinic have increased,  
putting a greater strain on the wards.

	1944.	1945.
Attendances at the Gynæcological Clinic .....	1,679	2,085
Admissions to the ward .....	556	556
No. of operations.....	534	509
(a) Vaginal .....	354	331
(i) Vaginal plastic .....	90	104
(ii) Vaginal hysterectomy .....	9	8
(iii) Minor operations .....	255	227
(b) Abdominal		
(i) Hysterectomy.....	70	100
Total .....	37	57
Sub-total .....	33	43
(ii) Laparotomy .....	92	67
(iii) Non-gynæcological.....	9	11
(iv) Miscellaneous (not requiring operation)	—	11
No. of deaths .....		4
(3 due to malignant disease and 1 due to myocardial degeneration).		



### Laboratory.

City Pathologist, Dr. G. J. Crawford.

Assistant City Pathologist, Dr. L. Stent.

Bio-Chemist, Mr. W. Portwood.

Dr. Crawford reports as follows:—

The appended table gives a list of the investigations carried out in the Clinical Pathology Laboratory during 1945.

The total number of specimens examined, including work done for Ladywell Hospital, was 34,314.

This shows no increase on the previous year, as with the present staff and accommodation available, we have reached saturation point though there are a number of further investigations that could be carried out with advantage, did time and circumstances permit.

A regular monthly supply of penicillin is now distributed to the hospital by the Ministry of Health and is available for all cases in the hospital which require it. The storage, making up and distribution of all penicillin solutions, powders and creams for use on the wards is still under laboratory control and has meant a considerable increase in work for the personnel. 3,242 penicillin preparations with sterile precautions were issued from the laboratory during the year. Penicillin is also now issued to general practitioners for use in suitable cases on application to the laboratory.

The Salford branch of the Emergency Regional Blood Transfusion Service under the Ministry of Health still continues to function at Hope Hospital. 1,894 pints of blood were collected during the year—a decrease on previous year's total—as since the end of the war in August, 1945, blood has only been used for local cases. It is proving of inestimable value in peace as well as in war as a life saving measure and steps are now being taken by the Ministry of Health to have it established on a permanent peace time basis.

#### *Bacteriological Examinations :*

Swabs for K.L.B.....	1,444
„ „ hæmolytic streptococci .....	907
Urine specimens.....	1,514
Exudates .....	574
Sputa for tubercle bacilli .....	1,885
Stools for culture.....	748
Smears for gonococci .....	330
Eye Swabs .....	88
Cervical swabs .....	162
Pus for tubercle bacilli.....	126
Blood culture .....	100
Anærobic cultures .....	16
Penicillin sensitivity .....	48
Coagulase reactions .....	19

*Biochemical Examinations :*

Serum Sodium .....	1
Urinary Calculus .....	1
Blood sugars .....	2,268
,, ureas .....	295
,, Chlorides .....	19
,, Cholesterol .....	17
,, Calcium .....	8
,, Proteins .....	4
,, Uric Acid.....	4
,, Acid Phosphates .....	42
Van den Bergh reactions .....	16
Fractional test meals .....	597
Occult bloods .....	520
Milk for analysis .....	—
Urea clearance tests .....	341
Urines for chemical examination.....	1,667
Ascorbic Acid Estimations .....	24
Colloidal Gold reactions.....	25
Tryptophane reactions .....	17
Stools for fat analysis.....	12
Sulphonamide estimations .....	105
Diastatic index .....	3
Inorganic Phosphate .....	2
Serum Potassium .....	3

*Haematological Examinations :*

Blood counts .....	438
Reticulocyte counts .....	462
Red cell counts .....	179
White cell counts .....	376
Hæmoglobin estimations .....	1,780
Blood groupings.....	501
Compatibilities .....	606
Blood sedimentation rates .....	471
Films for parasites .....	72
Platelet counts.....	22
Coagulation times.....	24
Prothrombin index .....	3
Paul Bunnell reactions.....	1
Sternal punctures .....	6
Fragility tests .....	3

*Pathological Examinations :*

Cerebro-spinal fluid .....	186
Pleural fluids .....	106
Autopsies .....	198
Sections (Histological).....	1,092
Smears for trichomonas vaginalis.....	114
Vaccines .....	19
Guinea pig inoculations .....	397
Sterility tests .....	14
Immunity.....	28
Penicillin preparations.....	3,242

*Emergency Blood Transfusion Service :*

Blood groupings.....	1,021
Donors bled.....	1,894
Hæmoglobin estimations .....	1,950
Plasma withdrawn .....	1,030
Cultures of plasma .....	510

*Ladywell :*

K.L.B. ....	2,603
Miscellaneous.....	999

GRAND TOTAL .....	34,314
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**Nursing Staff.**

Miss K. Martin, Matron, reports as follows :—

During the past year the work of the hospital has increased, and this of course means also that the student nurses and pupil midwives have gained much varied experience. Since October, 1944, 92 student nurses have commenced and 35 have completed their training. Most of these proceeded to one of the special fields of nursing, which is still the Ministry of Labour's regulation. This continues to be the cause of acute shortage of trained staff in hospitals, and we are only one of the many who suffer from this. Even so our plight is not so bad as in some training schools, but it adds heavy responsibilities to the ward and departmental sisters, for it results in an acute shortage of staff nurses on whom the sister can rely. This also means that the graduate nurse is denied that valuable experience in ward administration, which is so essential to the would-be sister. We anticipate a relief from these conditions, on the cessation of hostilities, and on the release of nurses from the services.

The examination results have been gratifying. Thirty candidates have entered for the State Final Examination during the year and 26 passed. For the Preliminary Examination, 73 entered and 68 passed.



The Hospital Examinations have again been conducted by Dr. Langley and Mr. Hughes, but Miss Dykes had to withdraw owing to ill health. Her place has been taken by Mrs. Bethell, Matron of Townley's Hospital, Bolton.

The Midwifery School is flourishing—the number of pupils has increased over that of last year. Since November, 1944, 49 have entered. Thirty-eight pupils entered for Part I of the Central Midwives Board Examination and thirty-six have passed. Since December, 1944, 11 nurses have proceeded to the Royal District Nurses Home, Salford, to take Part II training, and all have passed the examination and have qualified to practice as midwives.

The Gas and Air Analgesia Course has been continued—14 midwives gaining certificates of proficiency.

We have had a year of changes in the nursing staff. In May, 1945, Miss H. M. R. Jenkins left us to take up her appointment as Matron of St. Andrew's Hospital, Bow, and in March, Miss Campaigne retired after 30 years' service to the hospital. Miss Janson commenced duties in October as Deputy-Matron, and Miss Woodhouse came in May as Assistant-Matron. Other members of the Staff who have joined us are Miss Lundstrom, Assistant Tutor and Miss Baker, Assistant Home Sister.

The social side continues to flourish and the Student Nurses' Association has organised many enjoyable affairs, including the annual Sports Day and a number of dances. In December, 1944, a Christmas Fair was held and the sum of £450 was raised and presented to the Invalid Prisoners of War Fund, and in October, 1945, they raised the sum of £215 in three weeks as a gift to Salford Womens' Thanksgiving Savings Effort.

On the whole, we feel that much progress has been made both in work and play, and that the nursing staff has endeavoured to uphold the hospital's tradition of service to the city.

#### **General Department.**

Mr. C. A. A. Hankins, Secretary-Steward, reports as follows :—

During the year ended 31st December, 1945, the following work has been carried out :—

#### **General Wards.**

The following wards have been redecorated : A.1. A.2, B.3, N.W.1 and N.W.3.

Ward H.2 has been plastered and redecorated. The floor has been planed and polished.

Ward H.3 has been plastered and converted into the Sick Bay for nursing staff. Sterilising plant has been installed and cubicles made for change and examination rooms.

On Ward A.1, the autoclave was moved to the Receiving Ward. The office, mattress and old autoclave rooms were reconditioned for use as baby nurseries. The nurses' cloak-room was converted into the babies change room. A new nurses' cloak-room was installed.

Ward F.3 was painted and made ready for occupation.

Steam heated sterilisers were installed on Ward G.3.

#### **Hospital Annexe.**

New drains were laid to pavilions 3 and 5.

Wall bars and equipment were installed in the main hall for use in rehabilitation for patients.

#### **Operating Theatre.**

One of the main instrument sterilisers has been thoroughly overhauled. A new return has been run from the theatre steam sterilising units to the Boiler House.

#### **X-Ray Plant.**

A new Dean Couch has been installed in place of the Schall's Couch. Alterations have been made to the main from valve and twin valve supply systems.

#### **Boiler Plant.**

The side flues and boiler fronts have been completely rebuilt. The economiser wall and main flue of No. 4 boiler has also been rebuilt. A new feed line and valves have been installed on the economisers.

Several large renewals have been carried out on the hot water mains of the hospital.

#### **Nurses' Home.**

Bedrooms have been redecorated during the year. The sisters' and maids' dining rooms and main kitchens have been redecorated.

New electric mains have been run to various rooms and W.C.'s.

#### **New Stores.**

The prefabricated huts have been occupied by the main stores of the hospital. Additional heating and lighting have been carried out in the Units.

#### **General.**

Various lavatories and W.C.'s have been renewed in the corridors of the main hospital and Annexe.

The main electric supply system from the Sub-station in Stott Lane has been renewed and the alternative supply re-installed.

A large amount of reglazing and recovery work is still being carried out after the extensive damage by enemy action.

#### **Grounds.**

The grounds have been kept as colourful as possible. The granting of additional petrol has allowed more of the lawns to be kept in better condition. Several of the old trees on the front drive have been felled owing to disease. They are being replaced by flowering trees which should give additional brightness.

#### **Ambulance Department.**

This department has been kept very busy during the year and the work has been cheerfully performed. An electric truck for use with the internal services of the hospital has been added to the fleet of vehicles.

The work of the maintenance staffs and hospital porters has been carried out very efficiently during the year.

The Office Staffs continue to carry out their work satisfactorily and cheerfully.

During the year several members of the various staffs have returned from service with His Majesty's Forces. They are welcomed back wholeheartedly.



## STATISTICS.

1. GENERAL—	1943.	1944.	1945.		
Total hospital beds.....	1,004	1,044	1,010		
In hospital on 1st January.....	743	713	758		
New admissions .....	8,489	8,930	9,236		
Live Births.....	1,225	1,377	1,384		
	10,457	11,020	11,378		
Discharges during the year.....	8,817	9,282	9,541		
Deaths .....	927	980	1,072		
Remaining in hospital at the end of the year	713	758	765		
	10,457	11,020	11,378		
Mortality .....	8·8%	8·9%	10%		
2. X-RAY DEPARTMENT—					
Number of patients.....	6,191	6,328	6,788		
„ „ out-patients.....	2,380	2,655	2,931		
„ „ in-patients .....	3,811	3,673	3,857		
Details of X-rays taken :—					
Chest.....	3,165				
Genito-urinary.....	229				
Cholecystography .....	138				
Gastro-intestinal .....	1,174				
Abdomen (general) .....	158				
Bones and joints .....	1,681				
Midwifery and gynæcology .....	286				
Eyes, jaws, sinuses.....	146				
3. PHYSIOTHERAPY DEPARTMENT—					
	1941.	1942.	1943.	1944.	1945.
Total treatments.....	19,759	21,491	24,208	30,937	31,825
(a) <i>Massage</i> :			1943.	1944.	1945.
Number of in-patients .....			263	283	287
„ „ out-patients.....			518	658	494
			781	941	781
Number of treatments :					
In-patients .....			4,772	9,809	7,654
Out-patients.....			8,991	8,497	9,211
			13,763	18,306	16,865
(b) <i>Electro-therapeutics</i> :					
In-patients .....			192	212	240
Out-patients.....			465	820	555
			657	1,032	795
Number of treatments :					
In-patients .....			3,255	2,442	4,185
Out-patients.....			7,190	10,189	10,775
			10,445	12,631	14,960

(c) <i>Rehabilitation</i> (since 9th April, 1945) :	1943.	1944.	1945.
Exercises in wards.....			21,149
„ „ hall.....			1,553
(d) <i>Sunlight</i> :			
New in-patients .....			30
New out-patients .....			48
Number of treatments :			
In-patients .....			198
Out-patients.....			1,189

## 4. OUT-PATIENTS DEPARTMENT—

Dressings and treatments.....	12,621	9,902	9,001
Consultations .....	14,285	15,818	17,997
	26,906	24,720	26,998
Surgical Clinic (full-time staff) :			
Old patients.....	2,041	2,102	3,088
New patients .....	1,062	1,102	1,321
	3,103	3,204	4,409
Surgical Clinic (visiting staff) :			
Old patients.....	601	700	610
New patients .....	390	401	226
	991	1,101	936
Varicose Veins Clinic :			
Old patients.....	1,060	996	1,002
New patients .....	146	104	192
	1,206	1,070	1,194
Casualties .....	390	297	324
Ear, Nose and Throat Clinic.....	1,903	1,958	1,726
Orthopædic Clinic .....	1,479	1,373	1,622
Gynæcological Clinic .....	1,485	1,679	2,085
Medical Clinic .....	3,144	3,265	3,357
Children's Diseases Clinic .....	384	502	482
Psychiatric Clinic .....	382	834	969
Special Medical Investigation Clinic .....	112	118	77
Skin Clinic .....	74	406	805
V.D. Investigation.....	16	11	12

## VENEREAL DISEASES—

<i>Female (Ward E1X) :</i>	1944.	1945.
Admissions .....	45	115
Discharges .....	39	117
Deaths .....	—	—
Number of patients in hospital on 31st December, 1944/45.....	6	5

<i>Male (Ward E2X) :</i>	1944.	1945.
Admissions .....	79	117
Discharges .....	78	116
Deaths .....	2	—
Number of patients in hospital on 31st December, 1944/45.....	4	2

TREATMENT OF CANCER—

Number of patients referred to the Radium Institute during 1945 .....	63
Number of patients referred in previous years and retreated in 1945 .....	5

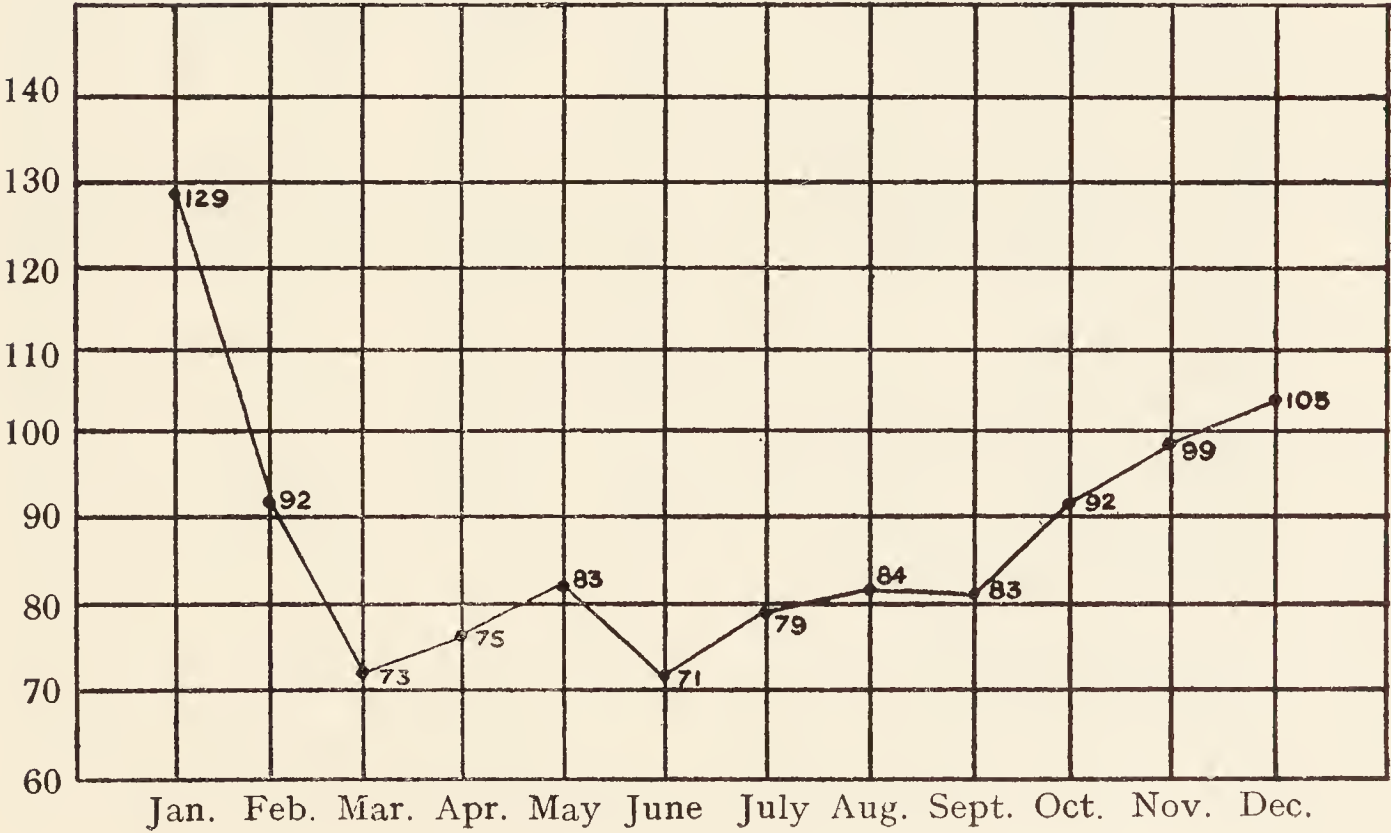
Analysis of cases :—

Number of patients treated by radium.....	15
Number of patients treated by X-rays.....	29
Number of patients treated by gold seed implant .....	4
Number of patients not treated.....	15
	—
	63

DEATHS—

Total number of deaths .....	1,072
Analysis of deaths :—	
Tuberculosis (all forms) .....	36
Cancer .....	172
Maternal deaths .....	8
Senility.....	155
Respiratory diseases .....	262
Cardiac diseases .....	147
Gastro Intestinal diseases.....	67
Genito-urinary.....	59
Accidental death.....	37
Other causes .....	129
	—
	1,072

TABLE SHOWING INCIDENCE OF DEATHS THROUGHOUT 1945.





## SUMMARISED STATISTICS RELATING TO HOPE HOSPITAL.

	1942.	1943.	1944.	1945.
1. NUMBER OF PATIENTS TREATED.....	9,653	10,457	11,020	11,378
2. X-RAY DEPARTMENT—				
Number of patients treated.....	5,621	6,191	6,328	6,788
3. PHYSIOTHERAPY DEPARTMENT—				
Number of massage treatments.....	11,621	13,763	18,306	16,865
Number of electro-therapeutic treatments .....	9,870	10,445	12,631	14,960
	21,491	24,208	30,937	31,825
4. OUT-PATIENTS DEPARTMENT—				
Number of dressings and treatments	9,578	12,621	9,902	9,001
Number of consultations.....	10,618	14,285	15,850	17,997
	20,196	26,906	25,725	26,998
5. SURGICAL WARDS—				
Number of operations performed ...	3,372	3,792	3,680	3,946
Number of out-patients (general) ...	3,998	4,094	5,672	6,539
Orthopædic Department:				
New admissions.....	272	320	532	384
Out-patient attendances .....	1,312	1,479	1,373	1,622
Ear, Nose and Throat Department:				
Patients .....	1,008	1,903	1,958	1,726
Operations.....	875	1,133	800	826
6. MEDICAL WARDS—				
Notification of infectious diseases....	304	322	237	153
Out-patient attendances .....	2,304	3,344	3,383	3,357
Electrocardiograms.....	487	526	542	571
7. MATERNITY DEPARTMENT—				
Deliveries .....	1,154	1,316	1,461	1,438
Ante-natal attendances .....	7,005	10,444	11,177	11,839
Post-natal attendances .....	525	702	746	698
Puerperal pyrexia.....	34	51	22	18
Maternal deaths (whole hospital) ...	14	11	13	8
8. GYNAECOLOGICAL DEPARTMENT—				
Out-patient attendances .....	1,156	1,485	1,679	2,085
Number of operations .....	409	791	917	957
9. V.D. WARDS—				
Number of cases .....	112	78	124	232
10. CHILDREN'S DISEASES CLINIC—				
Number of attendances .....	265	384	502	482
11. PSYCHIATRIC CLINIC—				
Number of attendances .....	444	382	834	968
12. CANCER TREATMENT—				
Number of cases .....	50	73	60	68
13. PATHOLOGICAL INVESTIGATIONS.....	30,877	31,499	34,917	34,314

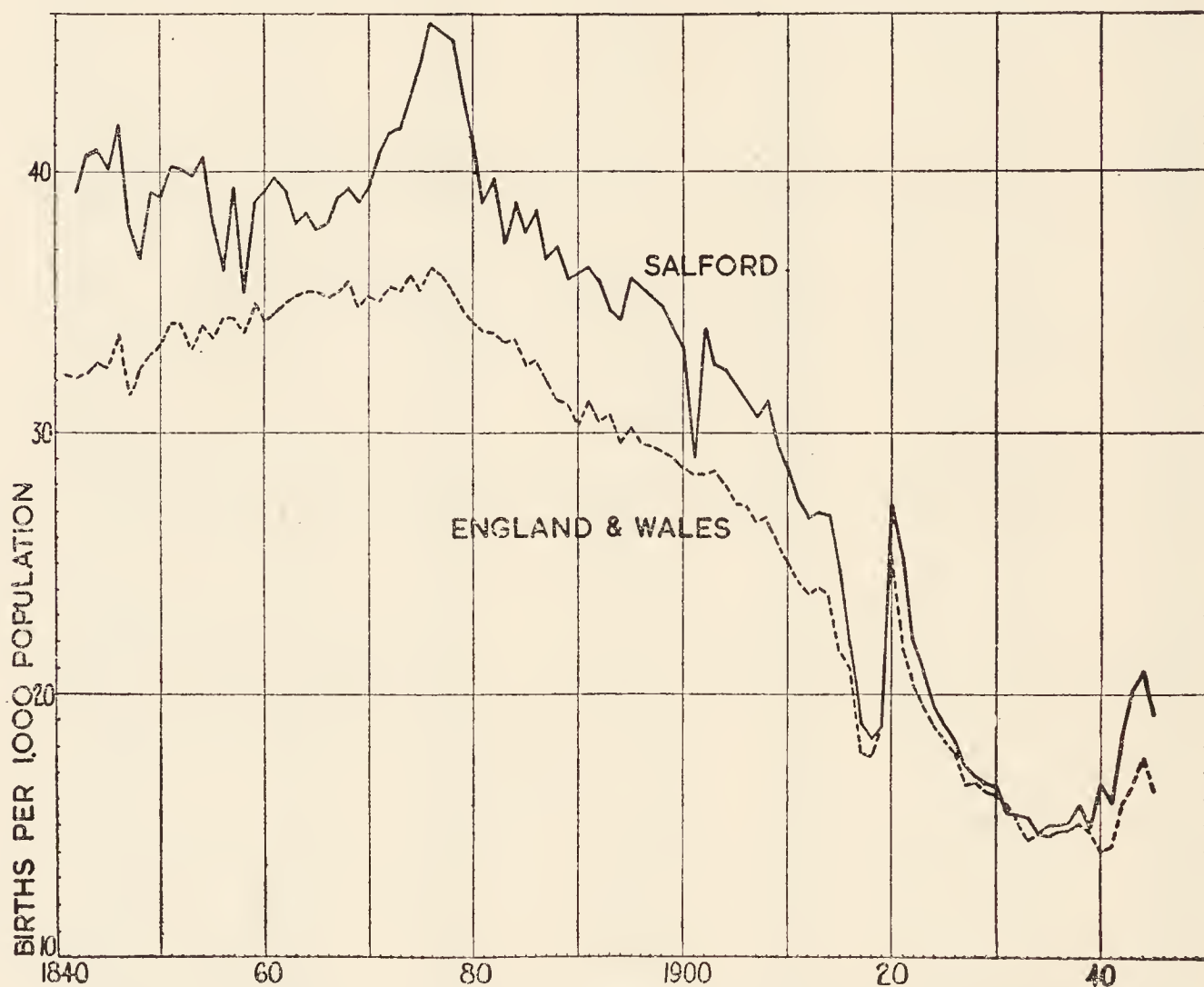
TABLE SHOWING THE WORK OF THE HOSPITAL SINCE 1914.

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Year.	Admissions.	Births.	Discharges.	Deaths.	Average Daily No.	Operations.
1914.....	2,728	12	2,135	591	749	149
1915.....	1,632	4	1,393	491	514	160
1916.....	1,330	—	941	353	439	175
1917.....	1,263	3	1,058	335	407	145
1918.....	1,402	16	1,104	391	303	144
1919.....	1,559	7	1,066	348	339	107
1920.....	2,516	64	1,736	451	689	163
1921.....	3,335	227	2,899	617	858	332
1922.....	3,720	263	3,272	745	888	395
1923.....	4,463	250	3,749	815	870	430
1924.....	4,416	182	3,742	922	811	823
1925.....	5,315	293	4,292	1,015	868	802
1926.....	5,471	366	4,839	903	943	882
1927.....	5,801	409	5,125	1,003	943	882
1928.....	6,430	559	5,545	926	960	1,076
1929.....	7,477	674	6,936	1,141	918	1,405
1930.....	7,583	685	7,150	1,038	969	1,807
1931.....	7,963	812	7,762	1,093	919	2,004
1932.....	8,521	843	8,156	1,052	961	2,186
1933.....	8,031	615	7,572	1,084	940	2,201
1934.....	7,893	745	7,548	1,081	940	2,080
1935.....	8,371	782	8,079	1,020	912	2,152
1936.....	9,504	961	9,291	1,122	977	2,691
1937.....	10,156	1,086	10,012	1,241	1,021	3,035
1938.....	11,059	1,312	10,042	1,077	937	2,970
1939.....	8,939	1,285	9,043	1,108	867	2,518
1940.....	9,616	1,338	10,746	1,483	1,060	2,521
1941.....	6,155	574	5,098	911	444	2,337
1942.....	7,835	1,154	7,760	894	648	3,392
1943.....	8,489	1,316	8,797	927	707	3,792
1944.....	8,930	1,461	9,282	980	740	3,680
1945.....	9,236	1,445	9,541	1,072	800	3,946

### A NOTE ON CERTAIN VITAL STATISTICS DURING THE PAST FIFTY YEARS.

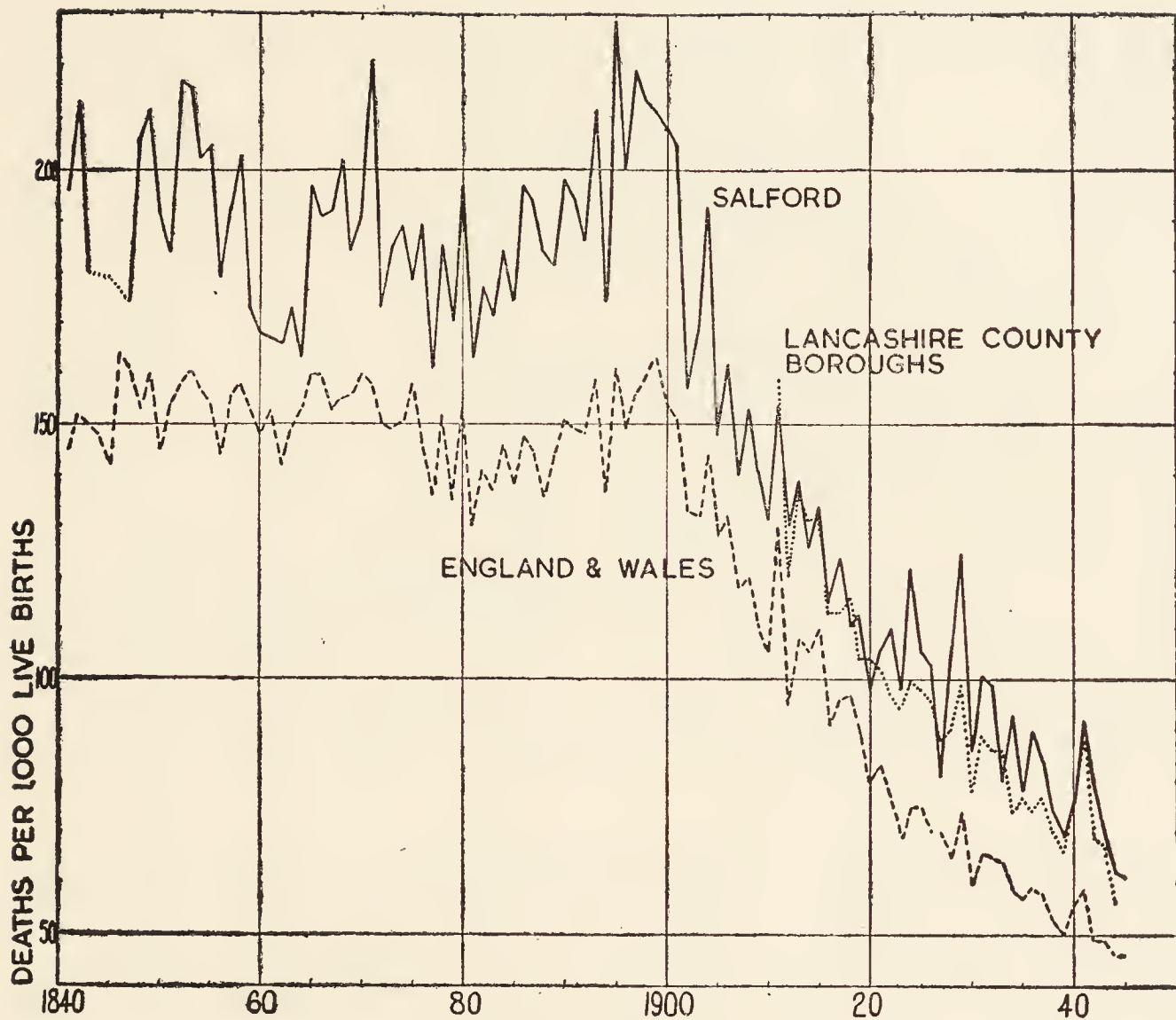
It has been thought desirable to include a brief record of certain changes in vital statistics in the years 1895, 1920 and 1945—fifty and twenty-five years ago—compared with last year (1945). The changes are best seen in graph form. (Included in the graph are the birth rates and infant mortality rates as far back as 1842. We are fortunate in that the area covered by the Salford Union and that by the present Local Government are co-terminus, and have remained practically unaltered for almost a hundred years. Hence, it has been possible to obtain the rates for the past hundred years from the local records and those of the Registrar General). It is of interest to note that Salford rates have always been higher than those of England and Wales, and generally higher than those of the average of seventeen Lancashire County Boroughs.



Birth rates—England and Wales and Salford for the years 1842-1945.

Fifty years ago, 229 infants out of every 1,000 born died before reaching their first birthday. (As is clearly shown on the graph the year 1895 had an exceptionally high infant mortality rate). In 1945 the figure was 61 per 1,000 live births—high enough in all conscience, in spite of the adverse social and economic influences which affect child life, such as poor parentcraft, bad housing, overcrowding, smoke, lack of open spaces.





Infant mortality rates—England and Wales, Salford and Lancashire County Boroughs, years 1842-1945.

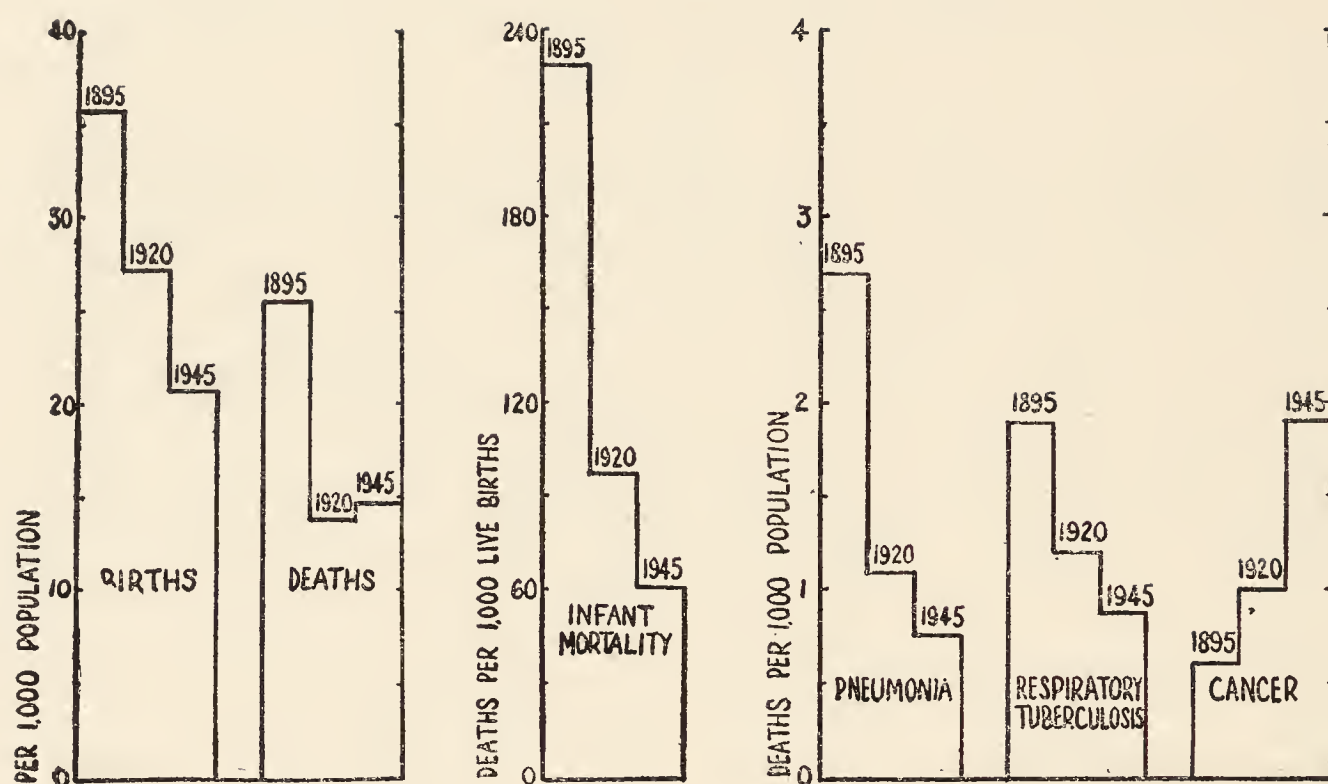
Salford ——— England and Wales - - - - - Lancashire County Boroughs ······

The population in 1895 was 207,450 rising to a maximum in 1927 with 247,600 and then steadily dropping to just under 200,000 in 1939. The 1945 estimate of 157,300 takes into account the many war-time absences, and the next year or two will doubtless show a rise to over 170,000.

The birth rate fell from 35·9 per 1,000 in Salford in 1895 to 15·0 per 1,000 in the inter-war years. A recovery to 19·2 was recorded in 1945 ; this is doubtless a temporary phenomenon.

The death rate in 1895 stood at 25·6 per 1,000, and in 1945 at 15·5 per 1,000.

In all statistics relating to disease there is a large possibility of error due to inaccurate diagnosis—a factor which must be borne in mind in all consideration of the records of the incidence of disease over the years.



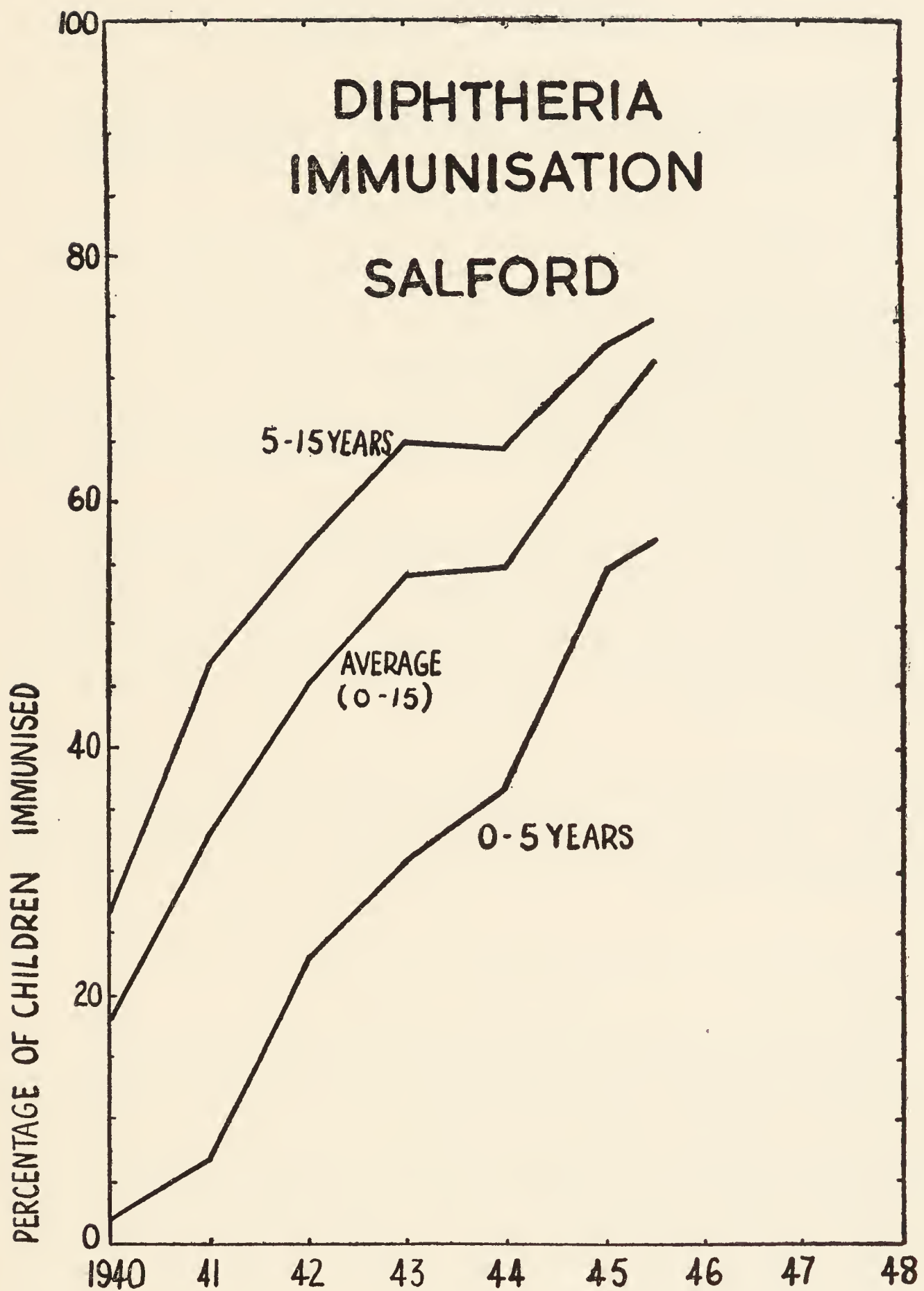
Comparison of some Salford statistics for the years 1895, 1920 and 1945.

Pneumonia death rates in 1895 were over three times as high at 2.7 per 1,000, compared with 0.75 in 1945—an impressive change, even allowing for inaccuracies. Respiratory tuberculosis death rates were halved. Scarlet fever, once a dread disease, has lost much of its sting. In 1895 there were 1,167 cases with 96 deaths; in 1945 there were 369 cases with only 1 death. (In this case there were several important contributory causes other than the scarlet fever to which the death was assigned). Diphtheria records have a similar story to tell. Fifty deaths resulted amongst the 194 cases in 1895; in 1945 there were 3 deaths among the 296 cases. Allowing for possible change in the severity of the disease, even the critic will have a difficult task to explain away these impressive figures which bear good testimony to the improved methods of treatment and, in the later years, the effect of immunisation.

A striking change in parental acceptance of diphtheria immunisation during the last five years is shown in the accompanying graph. At the time of writing, 26,917 Salford children have been immunised against diphtheria.

The story is not one of unending progress. We are not afraid to point to the disagreeable facts. Cancer rates, unfortunately, have an upward trend.

The improvement in public health is a grand story, but it gives no cause for contentment. The fight must go on. A generation hence, the present death and sickness rates will be contemplated with as much surprise as we now contemplate rates of fifty years ago.



Percentage of Salford children immunised. 1940-1946 (mid-year).



# REPORT

OF THE

## SCHOOL MEDICAL OFFICER

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TO THE CHAIRMAN AND MEMBERS OF THE EDUCATION COMMITTEE.

Mr. Chairman, Ladies and Gentlemen,

Twenty-four centuries ago Socrates said :—

*“ Are you not risking the greatest of your possessions ? For children are your riches and upon their training for well or ill depends the whole order of their father's house.”*

The passage of the centuries has not altered the truth that children are our riches. Indeed, it is a commonplace to say that the future wealth of the nation lies in the children. It is not so commonplace to act on this assumption, to provide personnel, services, and premises worthy of children and of their future, and to leave nothing undone that can be done for the health and welfare of those entrusted to our care.

As time goes on, our conception of the School Health Services widens. Soon our present efforts and provisions will seem very poor and inadequate for the task. Nevertheless, you may take some pride in the fact that you made the School Health Services not only function but flourish in the difficult last year of the war.

I should like to refer to certain developments that have taken place during the year.

One of the most simple yet significant changes has been the **greater use of the open air**. It has been a pleasure to see the nursery children, adequately protected, having their sleep in the open, however cold it may have been. Experience in different areas in the country prompts me to say that schools in the north-west region show a marked reluctance for open-air education. Perhaps climatic conditions are excessively blamed. Child health demands fresh and open air ; as much “ out of doors ” as possible. Thereby the child's lungs, skin, appetite and assimilation are healthily stimulated, chances of infection are reduced, and the cramping effects on mind and body of being confined in closed rooms are avoided.

An interesting development—a foretaste of the future—has been the use of MASS MINIATURE RADIOGRAPHY in school leavers. In 1945, only 100 children were examined, but a start was made ; extension on a wider scale is taking place at the time of writing.

Among other developments during the year were :—

The inauguration of an ORTHODONTIC SERVICE.

The medical inspection, for the first time, of pupils attending a Direct Grant School.

An enquiry into the **incidence of hernia** in school boys. This was made by Dr. Harold Heathcote and is described in the Appendix.

The establishment of a FOOT CLINIC took place during 1945, and already it is obvious that a real need is being filled. Conditions such as warts are not only common but contagious, and the problem is rendered more urgent by the communal use of gym shoes. In one school of over 500 children, four-fifths borrow gym shoes for gym lessons.

An innovation was also the use of an ALMONER in the School Health Service. Her experienced training in medico-social work solves many problems.

DENTAL HEALTH EDUCATION. It is obvious that there is a vast amount of health teaching to do. This is partly evidenced by the comparatively low ratio of fillings to extractions of the permanent teeth. Much educational work is required to convince parents of the advisability of conservation of the teeth.

Some lectures were undertaken among senior boys and girls by Dr. E. Matthews, of the Manchester Dental School. The children were keenly interested in demonstrations of the teeth of animals, and the way in which the teeth are preserved. Films were also shown. The cosmetic appeal of good teeth made an impression on the senior school children, and it is reported that a distinct improvement in dental care is evident.

DENTAL HYGIENIST. Endeavour was made to secure approval of the appointment of a Dental Hygienist to be attached to one of the larger schools where she might give constant supervision to the care of the children's teeth. It is proposed to raise this matter again with the Government Department concerned.

VERMINOUS INFESTATION—SCABIES. Attention is directed to the scabies surveys which were repeated during the year. An incidence of 0·6 per cent. was discovered, as compared with 0·8 per cent. in 1944. A rapid survey of over 20,000 children was made in each case.

LOUSE INFESTATION. Medical Officers note that there has been a reduction in the number of infested heads.

Great care was taken to follow up the family from which the infested children came. At the time of writing we have had over eighteen months'

experience with DDT emulsion and find it to be the best of remedies so far used. Further investigation is continuing.

ENVIRONMENTAL HYGIENE. A valuable survey was carried out, by the Sanitary Inspectors, on school premises including school canteens and kitchens. Many recommendations were made, and those which could be carried out effected an improvement. Nothing could be done about the existence of the 16 trough closets which, as was pointed out to the Committee, had they existed in factories, could have been dealt with promptly, if necessary, by legal action.

Recommendations regarding the cleanliness of premises where school meals are prepared were made. Attention was drawn to the necessity for well-ventilated and lighted food stores ; and, in particular, to the provision of suitable washing facilities for the staff. The fly nuisance in school kitchens was eradicated by the use of DDT. Improvements at one School Meals Kitchen where the drainage system was found, on inspection, to be grossly unsatisfactory, included the covering of an open drain. I quote this to show that some effective measures were taken to improve the environmental hygiene of school premises.

All the **milk** supplied to Salford school children is heat-treated prior to delivery. Salford has provided safe milk for its school children for 15 years. Seventy-eight per cent. of children receive school milk, and 37 per cent. have school dinners.

An interesting development in SPEECH THERAPY is that there has been more individual teaching. Results of questionnaires sent out to Head Teachers showed that roughly 2 per cent. of the school population were estimated to have defective speech.

The HEARING SURVEY, which has been previously reported, was continued.

NOISE IN SCHOOLS. Interesting observations were carried out on the amount of noise in certain schools, measurements being taken by a Noisemeter, as described in the Appendix. It is surprising how noisy schools are. This investigation, which was the first survey of noise levels with which I am acquainted, is of importance to the school child (and to the teacher) in that the child can only learn many of its lessons by hearing the teacher's voice above the loud background noise of school life. New as well as old schools are seriously defective in the provision for noise abatement. Much attention will have to be given to this in future planning.

MEDICAL INSPECTION. Increased use was made of the Rapid Survey method, and I commend the description given on page 7. I suggest that this survey method will be increasingly used in the future. More frequent visits to the schools bring the teaching and medical staffs close together for the discussion of individual children, there is more frequent supervision of hygienic conditions, and, above all, some defects are brought to light which might have been missed for months or perhaps years.



REGISTERS OF HANDICAPPED CHILDREN. In addition to the register already established for certain categories of handicapped children, blind, deaf, etc., registers are also being kept in respect of heart and rheumatism cases, children suffering from asthma, and those requiring a period of convalescence. These registers are revised regularly.

Close co-operation is maintained between Tuberculosis, Venereal Disease, and School Medical Departments. There are 17 congenital syphilitic children of school age on our register at the Venereal Disease Clinic, and vigilance, in this respect, will be essential in post-war years.

Special care is given to tuberculosis contacts who receive invitations for an overhaul every three months.

Time was found for investigations, one of which was a survey of the **incidence of scabies**. A description of this is contained in the Appendix, and a full report is printed in *The Lancet*, dated 26th January, 1946. The survey showed an incidence of 0·6 per cent. in over 20,000 children.

The other investigation, to discover the effect of a **daily vitamin supplement** on the health of school children, and one in which I was co-author with E. R. Bransby, Ph.D., H. E. Magee, M.B., D.Sc., and the late D. M. MacKecknie, M.B., D.P.H., is reported in the *British Medical Journal*, 9th February, 1946.

This investigation, an account of which is given in the Appendix, indicated that it is not necessary to go to an expenditure of money to provide "mass therapy" vitamin capsules. It shows that the way to better health of school children does not lie in taking pills, however popular in the public mind this may be. Health does not lie that way. It would have been a simple matter to provide school children throughout Britain with a few tons of vitamins, and I confess that I once had hopes that the results of the investigation would have been otherwise. It would then have been so easy to improve the health of our children. But we must look elsewhere—better environmental hygiene, good housing, open air education, sound health habits, good nutrition, the elimination of preventable disease, the diffusion of Health Education, getting our children to know the ways of health and to "love what they know"—these are the ways which lead to healthy childhood.

I should like sincerely to pay tribute to the helpfulness shown by members of the medical and nursing staffs, and the teaching and administrative staffs of the Education Department, and of the Director of Education, Mr. F. A. J. Rivett, M.Sc.

The wholehearted support given by you, Mr. Chairman, Ladies and Gentlemen, has been of the greatest help during the year.

Yours faithfully,  
J. L. BURN.

### Medical Inspection.

The examination of children in schools has been carried out by two methods.

1. ROUTINE INSPECTION of certain age groups. This method involves spending about 7-8 minutes, on an average, per child. The examination is a fairly complete one, including heart and lungs, and should permit time for discussion with the parent of the necessity for such things as immunisation against diphtheria, if this has not already been done.

Owing to shortage of staff it has only been possible to examine entrants and leavers in the routine medical inspections. It is hoped that when more staff is available at least one intermediate group will also be included.

2. THE RAPID SURVEY method is supplementary to the routine inspection but is not intended as a substitute. It aims at submitting all the children, in all the schools, to an examination at least twice a year. About 80-100 children are seen per session. They are stripped to the waist and examined for such conditions as poor nutrition, anæmia, skin disease, external eye disease, running ears, and deformities. It is not possible, in the time available, to include heart and lung examinations. Any child requiring a more complete examination is noted down for invitation to the Clinic. The help of the teachers is much appreciated in drawing the attention of the Medical Officers, when making rapid surveys, to any children whose condition has not been satisfactory.

It may be of interest to give the results of a rapid survey in an Infants' Department :—

One hundred and forty-two children were seen in two sessions. Seventeen were slightly subnormal in nutrition ; 3 were suffering from enlarged tonsils or adenoids ; 1 child had oral sepsis ; 1 had a discharging ear ; 2 had skin disease ; 1 had a squint ; 1 was a cripple.

To summarise, there were 26 children whose condition was not satisfactory. They were dealt with by the following methods :—

The 17 slightly subnormal in nutrition were invited to the Clinic and are to be kept under observation. The slight cases of enlarged tonsils and adenoids were invited to the Assistant Medical Officer for further observation, and the more severe case was referred direct to the Ear, Nose and Throat Specialist. One of the two cases of skin disease was invited to the ordinary Clinic ; the other was referred to the Skin Specialist. The discharging ear case was seen by the Ear, Nose and Throat Specialist, treated and subsequently discharged. The child suffering from oral sepsis was referred to the school Dentist, the squint case to the Eye Clinic, and the cripple to the Orthopædic Specialist, for appropriate treatment.

### Nursery Classes.

The Medical Inspection of the children in Nursery Classes and War-time Nursery Classes was carried out by three of the women Assistant Medical Officers. Forty-one Nursery Classes and 7 War-time Nursery Classes were visited, the latter being visited once monthly and the former twice in the year. A total of 131 visits were made, the number of children examined being approximately 2,000.

As in 1944 there was a high incidence of infections of the respiratory tract, including nasal catarrh, bronchitis, enlarged tonsils and adenoids. Nearly 100 of the 2,000 children were suffering from bronchitis. A disappointingly high number of the under-fives suffered from dental caries, minor and major orthopædic defects, debility and anæmia, in addition to skin disorders and diseases. Some of the defects found in the children attending these classes were :—Dental Caries (235) ; Nasal Catarrh (223) ; Enlarged Tonsils and/or Adenoids (139) ; Defect of Skin (135) ; Bronchitis (92) ; Orthopædic Defects (82) ; Squint (73) ; Debility and Anæmia (42) ; Otorrhœa (26) ; Scabies (4).

On the brighter side, all three Medical Officers report marked improvement in cleanliness of heads.

CLEANSING. Visits are paid to schools three times as frequently as formerly, and the improvement is doubtless due to the regular visiting, the vigilance of the staff, and the use of new remedies. Our children were the first of any large community to benefit from the use of DDT preparations. The Health Visitor/School Nurse has demonstrated the method of head cleansing to Nursery Assistants, who are also instructed in the treatment of certain minor ailments.

### Diphtheria Immunisation.

Eighty-two per cent. of the children have been immunised against diphtheria, and it is hoped, by further intensive effort, to increase this figure to 100 per cent.

### Treatment of Defects Discovered.

Whilst it is comparatively easy to find certain types of defects, it is more difficult to know what to do to improve the health of the children. Our meagre resources were fully used. Ten per cent. of the children had Sun-ray treatment. A very few children were recommended for admission to convalescent homes. Advice to the mother on the importance of home diet was given. Certain defects received the appropriate treatment—orthopædics being referred to the Orthopædic Specialist, squint cases to the Eye Clinic, otorrhœa to the Ear Clinic—but there remains a large amount of vague ill-health in the under-fives which it is difficult to remove. So many factors, social, economic, housing and other disadvantages of urban life (smoke pollution, lack of green fields and playing accommodation) act adversely.



### **Frequency of Visits of Medical Officers.**

The improvement in the frequency with which Medical Officers are visiting Nursery Classes means that, instead of a visit being paid once in eighteen months as was the custom in pre-war years and up to a year ago, the schools are visited at least four times a year. In some schools it has been possible for monthly visits to be paid by the Medical Officer. This is obviously of great benefit. The Medical Officer gets to know the children well, follows them up through history of illness, and also has greater opportunity of conferring with the teaching staff and keeping an eye on the environmental hygiene in the school, which means so much for the health of the child.

### **Work of Health Visitors/School Nurses in Schools.**

Further steps were taken through the year to improve co-ordination of the Child Welfare and School Health Services by appointment of an additional Health Visitor/School Nurse to replace a School Nurse, making it possible for "combined" work to be undertaken in Kersal Ward in addition to Mandley Park and Ordsall Park Wards.

Six Health Visitors/School Nurses are now doing full-time combined work, the remaining Health Visitors doing school nursing in Nursery Classes only. Nursery Classes are visited once monthly and War-time Nursery Classes once weekly by the Health Visitor/School Nurse.

Some Health Visitors/School Nurses also undertake duties in the Tuberculosis Services. Several examples came to light of the value of having the same Nurse to be responsible for Child Welfare, School Health Services, and such a special service as Tuberculosis.

### **Open-air Schools.**

Despite the unsatisfactory features of the open-air schools, particularly Frederick Road, to which I have drawn attention on previous occasions including my report for 1944, the majority of the children attending these schools show a definite improvement in health during their stay. I think the fresh air, good food, rest, and the care shown by the teachers of the children's physical condition are all important factors in the improvement.

This improvement shows itself not only in signs observed by the Medical Officer such as the disappearance of catarrhal conditions and enlarged glands, but also in more obvious signs noticed by the teacher and parents, such as more energy and better appetite.

It is a comparatively common sign for a new arrival at an open-air school to take very little interest at first in work, play or meals. After being at the school for a period of perhaps weeks or months the child usually shows more interest in all these activities.

### School Hygiene.

A survey of the sanitary arrangements at Elementary schools reveals that in 16 schools, mainly Church schools, there are trough closets, a primitive sanitary appliance, and one which may prove detrimental to health, and to the education of the children in the principles of hygiene.

It is of interest to recall that if the closets of this type had been present in any other buildings but schools, legal action would have been taken by the Health Department, and it would have been insisted upon that modern sanitary conveniences be installed. I must say that, thanks to Factory Legislation, industrial premises have often much better sanitation than that which exists in some of our schools.

### Clothing and Footgear.

It has been noticeable for a long time that the **clothing** of many of the children is shabby, worn, and often in a poor state of repair. It is, however, exceptional to find it really inadequate as regards warmth. This shabbiness, etc., appears to be due to a lack of money and lack of clothing coupons. The lack of money in a large family with a small income often leads to poor materials being bought in the first instance, and lack of coupons prevents renewal when it is due.

On the other hand, **footgear** in the majority of children is reasonably satisfactory. This is important from the health point of view, as wet, cold feet are much more likely to lead to illness than are shabby clothes.

Few schools provide facilities for **drying wet footgear and clothing**. Here is a point requiring urgent attention when schools are being modernised.

### Dental Report.

The past year has seen a continuation of the examination and treatment which now covers all the Salford children in all age groups, and a further improvement of services by the provision of facilities for the administration of general anæsthetics at the Murray Street Clinic, and the establishment of an Orthodontic Clinic, covering all types of work. In addition to the routine work, a survey of some 2,000 children who were undergoing a vitamin test was completed.

**ANAESTHETICS.** The fitting up of the Murray Street Clinic for general anæsthetics marks another step towards our aim of doing all extractions under gas, and in addition to relieving the strain on the Police Street Clinic, reduces the journey for the children in the Broughton area. During the year 3,313 general anæsthetics were administered. Unfortunately, the Regent Road Clinics are so short of accommodation that gas sessions cannot be held there, and the children in this area have to make the long journey to Pendleton. I consider that the necessary facilities and accommodation in the Regent Road area are urgently needed.

ORTHODONTIA. The outstanding improvement of the year has been the Orthodontic Clinic. Mr. N. Wild, the Consultant Orthodontist attends two sessions per week. This service, which is thoroughly established, makes Salford one of the few authorities to employ the services of a specialist in this branch of dental science, and the experiment has well justified its inauguration. Whilst the routine inspection and treatment of children in the School Dental Clinic is very necessary, and the basis for all school dental work, it cannot be expected that the Dental Officer has the time in the busy carrying out of his normal duties, to give the thought and treatment to some of the complicated problems of dental irregularity. It is, therefore, essential that one be employed whose thought and time is devoted solely to the treatment of orthodontic cases.

This service is receiving excellent support from the children and parents, who now realise that irregularities which were considered previously to be beyond the scope of any form of successful dental treatment, can now, with patience and co-operation, be treated so that gratifying results are established.

Whilst to some extent the service is functioning under hampered conditions owing to post-war difficulties, it can, however, be stated that all forms of dental irregularity are receiving treatment at the Orthodontic Clinic. Arrangements have been made with the Dental Hospital and Hope Hospital for taking X-ray photographs when necessary.

The popularity of this extension of the dental service is seen in the large list of patients who are waiting to receive attention. Apart from the gain in mechanical efficiency, the psychological effect on the children is most marked. It has been shown statistically that approximately 50 per cent. of any school population show some form of dental malposition. Thus, in an area the size of the City of Salford, the amount of treatment required can be easily appreciated.

### **Breathing Exercises.**

The Physiotherapist carries out the instructions of the Orthopædic Surgeon at special clinics held at Regent Road, Police Street and Murray Street. In addition she attends sessions of the Orthopædic Surgeon at Hope Hospital.

Included in her work are :—Massage, the Supervision of Appliances, and Remedial Exercises. A branch of this latter is the teaching of special Breathing Exercises.

Five hundred and one children received a course of nose drill and breathing exercises during the year 1945. Twenty-two children had special breathing exercises for chest conditions of the asthmatic type.

The exercise classes were held at the three School Clinics—Regent Road, Police Street and Murray Street—the children attending twice weekly. In addition, Barr Hill and Frederick Road Open-air Schools were also visited.



Special benefits were obtained from the exercises given at the Open-air Schools, as the children, practising their exercises out of doors, appreciated for themselves their increased feeling of well-being due to proper use of the handkerchief and deeper respiration.

Owing to shortage of staff it has not been possible to pay regular visits to the Open-air Schools, which is a great pity as many of the children attending these schools require this treatment. As a temporary measure these children attend the classes at the Clinics, but this is not really satisfactory because the exercises are not given in the fresh air. It also tends to make the classes at the Clinics too big. During the summer months it was often possible to have the classes out of doors at Murray Street Clinic, but the slope of the garden makes it unsuitable for the holding of classes. The conditions at Regent Road and Police Street Clinics are very bad, and certainly no improvements in the children are due to the effects of fresh air.

The shortage of handkerchiefs is becoming acute in most homes and far too many children seem surprised that a handkerchief should be considered a necessary part of their daily equipment, though a number admit to having one on Sunday.

All children having a tonsil and adenoid operation at Hope Hospital receive an invitation to join the nearest exercise class. If they do not appear on the first invitation a second is sent, but at present it is not possible to "Home Visit" each defaulter owing to lack of staff. A child who has been a mouth breather merely because of adenoidal blocking of the nasal passage is usually re-educated to correct nose breathing after one month's treatment, but in the more chronic cases a longer course of exercises may be required, especially as the child may have developed some secondary condition such as round shoulders and tight chest muscles.

Children suffering from special chest conditions require an extended course of treatment as their condition is usually of longer standing and involves some postural fault. Hope Hospital, Manchester Children's Hospital, and School Doctors refer the majority of cases, and as the work is becoming better known outside Doctors are now sending cases. It is very necessary to enlist the help and co-operation of the mother when treating these children, as the two weekly attendances at the Clinic are not sufficient. If the mother will accompany the child to the first few classes she will realise the value of the exercises, and gain sufficient knowledge to enable her to encourage and help her child to practise the exercises daily at home.

### **The Treatment of Spastic Children.**

This year it has been possible, for the first time, to co-ordinate the treatment of spastic children from babyhood, when the handicap is first noticed, on to school age, and eventually finding some form of work suitable to the child's capacity.

A comprehensive register has been compiled, including the names of those children under five, the school-age child, and the over-fourteens. The type of spasticity is recorded, the mental condition, the most suitable type of school for each child, and, for the older children, whether or not they are capable of following some form of occupation.

According to the further report of Miss P. K. Fogg, Physiotherapist, many children were not previously recognised as spastics until they were medically examined on reaching school age. This was probably due to the fact that the mother did not regularly attend a Welfare Centre, possibly because she did not realise the child had some definite trouble and was not just "slow" in development. It is now hoped that with the help of Health Visitors these children may be recognised and treated from an early age. The disadvantage of spastic children having no treatment until reaching school age is that, by then, the spasticity of the affected muscles has resulted in definite deformity requiring surgical treatment and appliances before re-education can be attempted.

The mental capacity of spastic children varies considerably, and it is impossible to get the same results with a child of subnormal mentality as can be obtained with a bright child.

The under-five babies are now given Neumann-Neurode exercises as soon as the condition is diagnosed. It is advisable to commence this treatment as soon as possible after the baby is three months old. These exercises are given to relax the tight muscles and stimulate the weaker ones, and to encourage the baby to use the affected limbs. Spastic babies are often found to be lethargic, and the increase in depth of respiration, and quickening of circulation, have a stimulating effect on the child's mental condition. It is hoped that if these exercises are regularly practised, the child will never suffer from contractive deformities. If a child reaches school age and shows gross deformities, much improvement may be obtained by stretching tight structures in plaster-of-paris splints, or by surgical means such as the lengthening of the tendo-achilles, or an obturator neurotomy. Whether or not surgical means are required, all spastic children need co-ordination exercises, and passive stretching of tight structures, throughout their school life. If a child is normally intelligent he is usually quite capable of attending an ordinary day school and mixing with other children without feeling inferior to them.

On reaching the school leaving age most spastic children have received all available surgical treatment. Any necessary appliances have been obtained, and the child educated in their use and care. A long course of co-ordination exercises have been given, and emphasis laid on the importance of using the affected limbs in everyday life. The child's mental capacity has been studied, and if the child fitted well into the life of an ordinary day school suitable occupation can be found. In most cases this is done, and a practically normal adult life is lived. During the first two years of the child's working life help is given in choosing the type of work well within the child's capacity, and supervision is continued.



Unfortunately, there are some spastic children who are incapable of living a normal life. This may be due to poor mental development, or to the frequency of fits. Physical deformities alone are rarely so great as to make a child ineducable.

It is impossible to generalise over these pathetic children. Each one has to be treated individually and made as happy as possible. Some are better suited to remain at home and can be visited by Home Teachers who interest the child in handcrafts, and give simple lessons. Other children may benefit from admission to residential schools.

The prospects for spastic children are brighter to-day than ever before. Formerly, they were frequently pushed in the background and forgotten. Now they are given every opportunity to live a happy and useful life.

#### **Foot Clinic.**

The inauguration of a Foot Clinic by the Education Committee was a new venture during the year. It is already apparent that school medical and teaching staffs have wasted no time in making full use of the facilities provided for the care of children's feet. As a result of the willing co-operation of head teachers and staff of the School Medical Service, the Clinic has been busy almost from its inception.

A number of interesting facts have emerged, the first of which is the prevalence of foot warts. The treatment of these lesions constitutes about 85 per cent. of the total treatments given. As these growths are contagious, it will be realised that prompt attention and eradication of them, with advice preventing further spread of the growth, will mean that much suffering and loss of school time will be saved.

Another very important factor which has emerged is the all-important question of footwear. Ill-fitting shoes will not only be the cause of much immediate discomfort, but the delicate structures of the feet of a growing child may be permanently deformed and the general health undermined.

Mr. Franklin Charlesworth, F.Ch.S., your Chiropodist, has reported with regret the large number of children wearing ill-fitting shoes. "Every endeavour, however, has been made to remedy the situation by advice to the parents when they attended with the children, or in the absence of relatives, a letter containing appropriate advice was sent. Parents have been recommended to bring new shoes to the Clinic before they are worn, so that they may be changed if still unsuitable.

"The co-operation of the shoe retailer along with that of the parents is all that is necessary to make a real practical advance in dealing successfully with a very serious problem.



“ It was also obvious that foot hygiene was an unknown factor to the children. Much could be done in this matter by talks at the schools on the care of the feet, and would not only do much to remedy this state of affairs but if dealt with in the form of a planned campaign, on the lines of Safety First, a real foundation would be laid to ensure sound and healthy feet for the future citizens of Salford.”

Hearing Survey.

During the year the Hearing Survey was continued by means of the Gramophone Audiometer. In addition to the 10,000 reported in 1944, 5,955 children were tested. Of these, 747 or 12·5 per cent. failed after re-test to reach the required level of hearing, *i.e.*, their result showed a 9 decibels or higher loss in one or both ears. These children were subsequently referred for further investigation by individual audiometric examination, and when necessary for treatment by the Ear Specialist, or tuition in lipreading. A favourable position at the front of the class, within easy hearing distance of the teacher, was recommended for many of the children, and the teacher notified accordingly.

RESULTS OF GRAMOPHONE AUDIOMETER TESTS.  
Average Hearing Levels for each Age Group expressed in Decibels.

Age in Years.	Number.	Right Ear.	Left Ear.
6 ... ..	40	6·7	6·8
7 ... ..	316	5·2	5·1
8 ... ..	905	4·1	4·2
9 ... ..	1,049	3·2	3·3
10 ... ..	956	2·3	2·4
11 ... ..	812	1·5	1·6
12 ... ..	862	0·8	1·0
13 ... ..	827	0·4	0·5
14 ... ..	152	—·03	0·0
15 ... ..	27	—1·5	—1·2
16 ... ..	7	0·0	0·4
17 ... ..	2	—3·0	—3·0
TOTAL ... ..	5,955		

It is interesting to note that the recorded average hearing level improves so consistently from the age of 6 to 14 ; a result entirely consistent with our work in previous years.

The main explanation of this is that as children grow older they are better able to co-operate, to understand, and to carry out the Gramophone test. The

lower hearing level of the younger children is doubtless weighted by the fact that some of them were not able to give their best performance. Every encouragement is, of course, given to them to do so. For example, if they fail the first time they are always re-tested, generally within 24 hours of the first test. Great care is taken to gain the child's co-operation and to demonstrate the test before it is attempted by the child. Records of 3 digits, 2 columns have been found in our experience to be most suitable for children and these, therefore, are always used.

In our first experience of testing it was common for a large percentage of the children who failed the Gramophone Audiometer to pass the Individual Audiometer test. Now, almost all who fail the Gramophone test are proved, after referral for individual audiometric examination, to need some form of aural attention. The removal of accumulated wax from a child's ears often restores normal hearing; hence an aural examination should take place prior to the Individual Audiometer test.

From analysis of the replies by the children undergoing the test to questions about ear defects, it was discovered that over a quarter of them had their Tonsils and/or Adenoids removed. Six per cent. stated they had suffered from previous Otorrhœa. This, however, is certainly an underestimate because Otorrhœa in children is often forgotten.

Children who were suffering from Otorrhœa and having no treatment were given invitations to attend the School Medical Clinic.

#### **Lipreading Class.**

This weekly class, under the tuition of Mr. W. Rasburn, of the Royal Schools for the Deaf, Old Trafford, has been continued during the year 1945. The following reports from Mr. Rasburn are evidence of the benefit received by the children who attend :—

- J.H. Has continued to show keen interest and progress has been good.  
Has little difficulty in following routine work.
- J.C. Concentrates much more readily. Improvement has been marked.
- G.C. . . . .Lipreading is helping his defective hearing and progress is very fair.
- L.J. Still very nervous but is gaining much benefit from the lessons. . . .

#### **Cases referred to the Royal Schools for the Deaf.**

Four of the 7 children referred for admission to the Royal Schools for the Deaf, Old Trafford, were listed after recommendation by Dr. A. W. G. Ewing, of the Department of Education of the Deaf, Manchester University, to whom are referred many of our cases of suspected defective hearing. Four cases were admitted to the Schools for the Deaf, and the remaining 3 are awaiting suitable vacancies.

### The Ear, Nose and Throat Clinic.

Dr. Florence Cavanagh reports :—

“ The Salford Education Committee's Ear, Nose and Throat Clinic has, of course, been established for some years, but this report only dates back to September, 1944, when I was appointed to take charge of it. It was with considerable interest that I began this work, and now after many months I realise that we are only touching the fringe of the problem.

“ So much loss of efficiency (and happiness) in adult life is caused by ear disease and chronic nasal catarrh, that it behoves us to treat diligently the early manifestations of these conditions in childhood. The two most important of these are the detection of early catarrhal deafness and the detection of the ‘ running ear ’ at its onset. A few weeks of assiduous care in the early stages of these conditions will cure the majority of cases, and I have personally made it my policy to see such cases every week for a few visits and then fortnightly. In these days of difficulties for housewives I have occasionally found a mother who did not wish to attend as often as this. However, it has nearly always been possible to win her co-operation when it has been pointed out to her that in a few weeks we could clear up the trouble completely, whereas, if she attended spasmodically at the start, it would be necessary to have attention at intervals for the rest of the child's life.

“ We have also at the Clinic begun to distribute drops for use in the nose and ears ; this has made a great difference to the parents' response, since previously we had either to ask them to attend Hospital (which necessitated more hours away from work for the mother), or to suggest that they obtained the treatment through their General Practitioner or the Chemist (and many could not afford this). A further result of this dispensing of medicaments has been that children have had more hours at school. Previously a child with chronic discharge from the ear would attend daily at the Clinic for many months, and even a year or two, and this obviously interfered with his school progress.

“ In the Ear, Nose and Throat Clinic, as in many other branches of medicine, we are handicapped by lack of staff. We want more Nurses so that every case can have expert dressings. We want more trained personnel for the individual testing of children's hearing, more Speech Therapists to teach children how to overcome their speech defects, more Physiotherapists to run classes for breathing exercises and to give artificial sunlight. Unfortunately, at present any child who requires such services must have his name added to a waiting list, and it may be a few weeks before remedial treatment can be started.

“ I should like it to be possible for every child in Salford to have a course of artificial sunlight each winter. I should like to see every child who requires an operation for removal of tonsils and adenoids admitted to Hospital within a few weeks. I wish that every child who is found to be severely deafened could be admitted to the School for Deaf Children in the following term, but none of



these things can be done until we enlarge the scope of our work. There are, however, some things that we *can* do now. We can make it a rule that every child of four who is not talking fluently, and every child who has even a slight speech defect, should be referred to the Ear, Nose and Throat Clinic for investigation. Similarly we can ask that every child who shows any loss of hearing be examined in this Clinic. If we do this, we shall not meet the distressing cases of children who are turned on to the labour market with a note to the effect that 'any job which requires good hearing is unsuitable.'

"If we are to achieve these ideals we must educate the public still further. Lectures illustrated by short films should be given to the schools, so that the children could understand why we insist on treatment. Slightly different lectures but still illustrated by films could be given to the parents to imbue them with the desire to give their children the best chance. It may even be possible to plan short films which will be suitable for showing in local cinemas.

The one thing we can be sure about is that there is much hard work ahead and much scope for new ideas, if we are to give the children the care which they deserve, and I hope that the Ear, Nose and Throat Services will go from strength to strength in the forward march."

### **The Ophthalmic Clinic.**

During the past year this Clinic has been held three times weekly at Victor Street, under the supervision of an Ophthalmologist and a trained Nurse, and 3,476 attendances have been made. These were errors of refraction, 2,770, and other defects or diseases of the eyes, 706. Attending this Clinic are children suffering from defective vision, squint and external diseases of the eyes. They are referred by the School Medical Officers in their routine inspection of schools, by the teachers, and an increasing number by the parents themselves. Children of all ages, from birth to leaving school, including Secondary Schools, are referred for treatment to this Clinic.

**REFRACTION CLINIC.** These children are usually suffering from some defect in the vision. They usually attend three times. At the first visit a test of the vision is taken and any squint or other external abnormality is noted. If a defect of vision is found, Mydriatic eye drops are given for daily application till the second visit a week later, when a refraction and complete examination of the eyes are made. These drops affect the sight of the child for reading and close work, but the distant sight is unaffected, so the children can attend school, but are unable to read. In the case of Secondary School children drops are only given for one or two days so as not to interfere with their studies. At the second visit a test with lenses is made, and finally a prescription for glasses is given in those cases which require them. In some cases, when the subjective test with lenses is not satisfactory under the drops, a further visit is made two weeks later when the effect of the drops has disappeared. The child is then directed to the Optician who measures him/her for spectacles. When the glasses are ready, the child attends for the third time to collect them. A final test is made

of the lenses and fitment of the frame, any necessary adjustment being made. The glasses are supplied to the children immediately on completion, irrespective of payment. The nickel silver frames are now supplied free of charge, but if parents desire a more elaborate pair of frames, a deduction is made corresponding to the price of the free glasses—the lenses being the same whatever frames are chosen.

Contrary to the expectation of some, the fact of free provision has not involved abuse.

Last year an arrangement was made whereby children with artificial eyes were able to get them renewed under a part payment system. These are now supplied free of charge, and it is gratifying to note that the few children to whom this applies have not been without an “eye” and so the complications of defective socket have not been noted.

The children attend this Clinic exceedingly well, and are usually accompanied by their parents or a responsible adult. The parents are invariably very co-operative and quite willing to follow the instructions and advice given, and to obtain glasses if advised. The rare cases are those where the children do not complain of defective sight at school or reading, particularly in the case of boys; where the parent is frightened of accidents and breakage of lenses; and in the older children who are sensitive to teasing. Some children definitely do not want to wear glasses, but when the advantage of the better sight with glasses is pointed out to them on the test chart, they are quite amenable.

All repairs and adjustments are dealt with immediately and not placed on the waiting list. All cases sent as “Urgent” by the teachers and Doctors are given an early appointment regardless of the waiting list; also Child Welfare cases and older children accompanied by parents who are worried about their children’s sight. Through seeing these children “out of their turn,” and there are a great number of these cases, there is some little delay sometimes in seeing children on the routine waiting list.

The number of glasses prescribed, 1,304, may seem rather high, but it should be noted that these are not all new cases, many being a change of lenses from those which the child has previously been wearing.

The number of repairs seems similar to that in previous years. The fact is that repairs are now attended to much more promptly and effectively. Glasses are never prescribed unless absolutely essential for the good of the child’s sight, or to avoid troublesome symptoms such as headaches, etc., developing.

There are a number of children at present in ordinary schools who should be in special sight-saving classes. These number: girls—14 certain cases and 8 doubtful ones; boys—18 certain and 5 doubtful cases. The “doubtful” ones are children whose sight is progressively going worse, in spite of treatment, and



who will probably be "certain" cases within a short period of time. The certain cases are comprised of: girls—10 high Myopia, and 4 other diseases, and boys—9 high Myopia and 9 other diseases. For all these children it is definitely harmful to attempt to read ordinary school books and see the board. In some cases they cannot do either, and should be taught, by specially trained teachers, handwork and lessons which do not involve using their sight, so as to preserve what sight they have, and if possible stop the downward progression of their condition.

DEFECTIVE VISION. The children with defective vision may be divided into Hypermetropes, Myopes and Squints.

#### HYPERMETROPE (Long Sight).

These form the majority of cases and may be divided into simple Hypermetropes and cases of compound Hypermetropic Astigmatism. They are defects from birth, and are due to the shape of the eye being short in length from front to back, and, in the case of the Astigmatisms, generally due to the surface of the cornea not being quite even in all directions. Symptoms may be caused at any time in life but usually when there is increased close work, and consists of headaches, difficulty with close work, reading, sewing, etc., and inability to see accurately what is written on the board. Glasses are usually prescribed for all the time in school and close work at home, but in the higher degrees they may have to be worn constantly. There is a tendency to improve as the child grows older, particularly where glasses have been worn to avoid troublesome symptoms developing.

#### MYOPES (Short Sight).

These include cases of simple Myopia and compound Myopic Astigmatism. Myopia usually shows itself in the slightly older child from 10 years upwards. It is generally due to an increase in length from the front to the back of the eye, and tends to increase during the growing years, especially the 'teen ages, usually ceasing to get worse when general growth stops. In some cases it is hereditary and then shows at a much earlier age, and is consequently more serious. The main symptom is difficulty with distant vision, seeing the board, destination of trams and 'buses, and seeing in the cinema unless seated near the front, though reading and close work are quite clear. In the early stages headaches may be present, but not always. Thus the condition is often definitely established before any complaint is made. Glasses are invariably prescribed for these cases and advised to be worn constantly, because though the child can see to read perfectly (and these children are usually very keen readers) it is the excessive close work which tends to aggravate the condition. These children are warned against reading too much and especially too long at a time. In early cases one sometimes has to insist on the child wearing glasses as the child does not realise what he/she is missing in the distant field of vision.

Much time is spent with children suffering from Myopia, in making sure that the parent and child understand instructions. Written copies of instructions



are handed out to each case. Myopia is more prevalent in the Secondary Schools because of the extra study these schools entail, and because of the longer school life—this being especially the growing period of life, the usual time for Myopia to increase. It is important to try to arrest the progress of the Myopic in the early stages as these children often wish to continue their studies at college, or elsewhere—many professions are closed to applicants with a high degree of Myopia. Myopes are invited every six or twelve months, re-examined and their lenses changed according to the progression of the Myopia.

#### STRABISMUS (Squint).

These patients may be Hypermetropic or Myopic (usually the former) and the eye or eyes may turn inwards or outwards (usually the former). The defect is obvious to the parent, who usually seeks advice soon after its commencement. Glasses are invariably prescribed in these cases, and are to be worn constantly whatever the age of the child, provided the child is stable on its feet. Parents are usually quite willing to obtain glasses however young the child. After the child has obtained the glasses he/she is referred to the Orthoptist for treatment. This consists in occlusion of the “ good ” eye in order to improve the vision of the squinting eye, because a squinting eye invariably has defective sight. This treatment may start as early as three years old. The child is seen every 2-4 weeks, and the vision of the two eyes noted. When the vision of the two eyes is equal, occlusion ceases, and then at seven years of age treatment on the synoptophore is started, to develop binocular vision. Often by this time the squint has disappeared, certainly whilst wearing the glasses. In cases where the squint is still present whilst wearing glasses and after a course of Orthoptic treatment, an operation may be necessary to straighten the eye and so cure the squint, but this will not improve the vision of the squinting eye if still defective. Operations are now being performed at Hope Hospital every week. The children are admitted for two weeks, then if everything is satisfactory they are sent home and referred to the Clinic for post operative treatment. They are also seen by the Surgeon at Hope Hospital Out-patients’ Department. They do no close work for another two weeks, and do not attend school. Then they may resume normal school and home life, but are examined frequently until the eye has completely settled down. In some cases they are able to leave off wearing their glasses, but it depends entirely on the state of the vision.

There has been again a large attendance of Child Welfare children, under school age. Many of these have squints, and if constant, and the child is safely walking, glasses are prescribed, and the parents are willing to get them and see that the child wears them constantly. Thus the child with a squint is seen early, and treatment started. By the time the child goes to school and starts close work, the squint has often disappeared, and so the incidence of squint in later life is considerably lessened. If the squint is not constant in these tiny children, and only seen occasionally, Mydriatic drops (dilating) are given for the “ good ” eye and the child is seen frequently until the squint has disappeared. This often happens and so many squints are stopped before they have properly developed.

## INTERNAL EYE DISEASES.

These are discerned on internal examination of the eyes under Mydriatic drops, and are comparatively rare. Treatment is advised, and the child is seen frequently. As these are often due to general causes, the child is referred to the Special Departments such as the Municipal Clinic, Tuberculosis Department or to Hospital for further treatment which cannot be given at the Clinic.

## EXTERNAL EYE DISEASES.

These comprise external diseases of the eyes and lids, and are often referred from other Clinics. The number varies with the time of the year, being more prevalent in the spring and autumn when there are cold winds and variable weather. General health is usually lower in spring, following the winter. The children are examined, treatment advised and given, and are seen regularly until cured.

Cases of chronic Blepharitis are becoming rarer, due to modern methods of treatment which are applied regularly, and the treatment being persisted in after an apparent cure. Also, in many cases, to the wearing of spectacles which correct their Astigmatism. The more serious types of inflammation such as Phlyctenular Conjunctivitis and Ulcers of the Cornea, both of which are likely to lead to defects of vision, are also not so frequent. This again is due to modern medicine clearing up the condition more quickly, before permanent injury is done to the eye, and also to the children's persistence in the treatment both during and after the attack. In many cases these are due to low general health, and the children are referred to the Sunlight Clinic, and ordered vitamins, Cod Liver Oil and Malt, etc., and so, as the general health improves, the eyes get stronger and not so liable to a repetition of the disease.

The acute suppurative conditions are rarely seen now because the child is treated in the early stages before the deeper tissues are involved.

"Styes" are not seen so frequently now because the children are wearing glasses to prevent the strain, and then the milder infections of lids and conjunctiva are treated and cured before they involve deeper tissues and the condition becomes chronic.

The milder conditions of Conjunctivitis are still seen but quickly clear up under regular treatment, and leave no after-effects.

These children are rarely advised to be absent from school, as experience teaches that the condition clears up quicker when the child attends school and attends the Clinic regularly, which they tend not to do if absent from school. The risk of infection as regards other children is very remote, except in the cases of acute suppurative conditions which are now very rare.

In many cases the parents, including the mothers, are out at work some time of the day, and so cannot watch the children, and they go out to play in



all weathers, get their hands and faces dirty, and with rubbing the eyes, tend to aggravate the condition. In school the eyes are less irritable due to the children being cleaner under the supervision of their teachers.

There are quite a number of babies, referred to the Clinic from the Child Welfare Department, with blocked lachrymal ducts and slight infections of the eyes dating from birth or the early weeks of life. These quickly clear up with modern treatment when applied regularly by the mother, and more permanent damage to the eyes is prevented.

### **Child Guidance Clinic.**

Dr. Muriel Hughes reports as follows :—

This Clinic has just completed its first four years of service. Primarily sponsored by the Education Authority it is, at the same time, an indispensable branch of the School Medical Service.

During the last two years the work has been carried on under difficulties, chiefly due to shortage of staff. This may have reduced to some extent the continuity of its service. The staff is now complete and consists of a team of workers :

1. A full-time Psychiatric Social Worker, whose duties include the general administration of the Clinic, the visiting of homes, interviewing and advising of parents whose children need and are under treatment. The Psychiatric Social Worker has a very wide field of activity in making known the work of the Clinic to other public bodies, in giving advice, and in helping to make known the work by giving lectures. The Child Guidance Clinic has close contact with the Day Nursery Association, and such bodies as the Maternity and Child Welfare Clinics, and Speech Clinics.

2. The Educational Psychologist, whose work includes liaison between schools and educational associations and the Child Guidance Clinic, intelligence testing of all children referred, the organisation of remedial coaching for children whose educational backwardness contributes to their difficulties, and play therapy with children under treatment. Our Educational Psychologist is employed full time by the Education Authority but only part-time is given to the Clinic. There are possible developments of the Child Guidance Clinic on the psychological side. Up to the present time, owing to insufficient staffing, the small premises and lack of suitable material due to war-time shortages, this side of the work has not been developed to the full, but the possibilities are borne in mind for the future.

3. The third member of the staff, the Medical Director, is a Consultant Psychiatrist. Her duties include the direction of the Clinic Medical Services, the diagnosis of the problems submitted for investigation, the Psycho-Therapeutic treatment of children requiring it, and the furnishing of reports to the Educational and Medical Authorities, Juvenile Courts and other public bodies. The Consultant



Psychiatrist devotes four sessions per week to the work at this Clinic. This represents an increase of two sessions per week compared with 1944 but there is still need for further development of this work.

Improvements in the premises are under consideration for the immediate future. The shortage of space is already felt as an inconvenience and a handicap to the wider development of the work. Up to the present time approximately 450 children have been referred, and most of these have been dealt with or are at present under treatment.

It would perhaps be of interest to enumerate the aims of the Clinic, and the methods of dealing with the problems submitted. It does not follow that every case which is referred to the Clinic is necessarily suitable for psychiatric treatment—some difficulties having been diagnosed may be resolved by means of advising the parents. Others in which the problems are chiefly environmental and social may need advice regarding resettlement. The children who are suffering from emotional problems which may manifest themselves either as behaviour disorders, actual delinquencies, or even psycho-somatic disorders or hysterical symptoms, are regarded as suitable for psycho-therapeutic treatment on analytical lines.

The usefulness of the Clinic would be greatly enhanced by a closer association with all branches of the medical services, which should lead to a greater familiarity with the advantages of psychiatric investigation, not only as a means of diagnosis and treatment but also of prophylaxis.

### **Speech Therapy.**

During the year, rooms for a new Speech Clinic were selected at 1, Acton Square, adjoining the Child Guidance Clinic with which, it is hoped, there may be even closer co-operation. This Clinic supplants previous ones held at Halton Bank and Regent Road Schools, and accommodates children from those areas.

Through the courtesy of the Director of Education questionnaires were sent out to the Head Teachers of schools, asking for information regarding each child suffering from defective speech. The returned, completed forms enabled the Speech Therapist to discriminate between children in urgent need of, and likely to benefit from Speech Therapy, and those less serious and unsuitable cases. Roughly 2 per cent. of the school population, which is the figure generally expected, were estimated to have defective speech.

The increased clerical work from this survey necessitated the curtailment of school and home visits, although all urgent cases were seen. One boy, aged five years, was visited at his school whenever possible. This was a case of special urgency referred by the Child Guidance Clinic. There was no one able to bring the boy to the Clinic, and his very adverse home background made attention desirable.

The number of children attending the three Speech Clinics during the year was 77, and included stammerers, cases of cleft palate, dyslalia (faulty articulation), dysphonia (husky voice), and children suffering from other defects of speech. Of the 39 children who were discharged, 22 had reached a satisfactory standard, and 4 left school after having made progress.

### Special Investigation Clinic.

All cases of rheumatism in children can be referred to the Special Investigation Clinic held at Hope Hospital. Children suffering from acute rheumatism are recommended for hospital treatment. Severe rheumatic heart cases can be sent to the Liverpool Heart Hospital School. Milder cases, after the acute attack, are sent back to school with a varying amount of restriction of exercises, games, etc., and these are kept under observation by the School Medical staff.

A special register of these cases is maintained, and home visits are made by the Nursing staff to enquire into the children's environmental conditions.

Home visits are carried out, at regular intervals, of those children who are too ill to attend the Clinic.

During the year 1945, 74 attendances were made at the Special Investigation Clinic. Of this number, 72 children reported for the first time, and 1 paid two visits.

The reasons for their visits were :—

Examination of heart lesions, suspected or real, 36; suspected rheumatic pains, 17; and various other complaints such as underweight, enuresis, suspected chorea, suspected epilepsy, etc.

Of the children suffering from **definite** cardiac lesions, 63·5 per cent. were regarded as fit to take part in school life as if they were "normal" healthy children.

Of all the children attending the Clinic, 86 per cent. were thought to be fit to attend ordinary school and take part in routine drill and exercises.

### Consultant Skin Clinic.

The Consultant Skin Clinic has continued in operation during the year and has now completed three years' service. This service is intended, in the first place, to provide facilities for the diagnosis and treatment of skin disorders amongst school children, but its services are equally available for adults suffering from skin diseases.

The Clinic is available once weekly at Regent Road, on Thursdays at 2-30 p.m., and is attended by the Consultant Dermatologist, Dr. A. Gill. Similarly, an Out-patient Skin Clinic is held at Hope Hospital every Wednesday at

10-30 a.m., and beds are available for skin cases in the hospital. The work of the two Clinics has been co-ordinated so that facilities of either are available, according to suitability.

The work in both Clinics is still increasing steadily in extent as their services become more widely known.

The type of new cases seen during the year under review were :—

Verrucae, impetigo, scabies, eczema, urticaria, dermatitis and sundry others.

During the year, 323 new cases were seen, as compared with 204 in 1944, an increase of about 60 per cent.

Scabies and impetigo together form 25 per cent. of the total, and verrucae 17 per cent.

Urticaria, the giant allergic type and the smaller papular variety (which can simulate scabies perfectly) account for 59 cases.

Amongst various new methods of treatment which have been tried out during the year, the use of Penicillin as a watery spray in superficial septic skin conditions (*e.g.*, staphylococcal and streptococcal conditions such as impetigo contagiosa, infected scabies, etc.) has proved highly successful. It is used as a watery spray (400-500 Oxford units per c.c.) is highly effective, simple, economical, and obviates the use of greasy creams which tend to destroy the potency of the Penicillin.

Treatment was made available on these lines early in November last, and about 40 cases have been treated to date. Allowing only for one spray daily, lesions of impetigo heal in 3-5 days, leaving no trace. The use of Penicillin in skin conditions is bound to increase in the future.

The total attendances at the Regent Road Clinic during the year were as follows :—

Children of school age, 486 ; pre-school age, 56 ; and adults, 127.

It will be seen that total attendances have more than doubled during the year.

### **Physical Education.**

The following is a report submitted by the Organisers of Physical Training :

In previous reports the facilities required for adequate instruction in Physical Education have been stated. They are reviewed here, briefly, under the headings of Staffing, Accommodation, Clothing and Equipment.



STAFFING. This continues to be a most difficult problem. The shortage of teachers continues, and the number of children per class remains very high indeed. During the last three to four months, there has been a return of some of the men teachers from the Forces, which has helped the work in boys' departments. It has not helped the staffing situation generally as many married women teachers tender their resignations when their husbands return.

ACCOMMODATION. Not much progress has been achieved in this direction. A few more schools have made available space for indoor lessons. Owing to shortage of labour, no playground marking for minor games and activities has been done, but it is expected that this will be arranged for within the next few months.

CLOTHING. Suitable shoes for Physical Education are still an outstanding problem. Limited quantities of rag waste shoes continue to be supplied to the schools. It is hoped in time that provision will be made for every child to have its own pair of shoes.

The provision of garments for various branches of Physical Education is at present under consideration. Some schools are making for themselves shorts and knickers out of old black-out material.

EQUIPMENT. This remains a difficult problem. A further cut was made in the allocation, by the Ministry of Education, for this year. The acute shortage of footballs has created distinct hardship in many cases. It is still impossible to get most small apparatus repaired.

The physical activities in the educational scheme are reviewed under the following headings :—

- (a) Physical Training (including remedial work) ;
- (b) Organised Games (including athletics) ;
- (c) Swimming.

PHYSICAL TRAINING. The daily physical training period has been maintained in all departments. Whenever possible the work is done out of doors. There are still many schools, where, in bad weather, the work must be omitted entirely, or a makeshift lesson be taken in the classroom.

REMEDIAL WORK. Owing to staffing difficulties it was found impracticable to follow up the experiments in remedial work which were carried out in four of the girls' departments last year, and the work has been left in abeyance until conditions are more favourable.

Work of this nature is being carried on, however, in one or two of the Secondary Schools where teachers, fully qualified in remedial as well as educational work, are employed. The School Medical Officer's reports indicate that the majority of cases show improvement.

ORGANISED GAMES AND ATHLETICS. One of the most important aspects of this branch of the work lies in its value as a carry-over subject from childhood into adolescence and maturity. It is evident that the child who leaves school having little skill in games is not very likely to devote his leisure to healthful activities in the open air, whereas his more fortunate brother or sister with greater skill will probably be most anxious to do so. It is for this reason, if no other, that every effort should be made to reach as high a standard as possible whilst the child is still at school. It is important also that coaching should be for all children, and not for the selected few who have attained, or who hope to attain, a place in the school or form team.

The facilities available are still only fair. The Education Committee's ground at Legh Road is now derequisitioned, but awaits reconditioning. The site at Stott Lane is not yet available. Good use has been made of the Committee's ground at Lower Broughton, and of the park-land available. In addition, the Parks Superintendent has agreed to allow games on land not previously used for this purpose in Buile Hill Park and Peel Park.

There has been further extension of school games and league football by the Salford Schools Athletic Association. The netball section has restarted after being in abeyance during the whole of the war period, and in addition a new section has been created for rounders.

Athletic training should form part of every school scheme of Physical Education. It should be an education in skill, and not, as it quite often is, a means to staying power. It is felt that this section of Physical Education has not yet received the prominence which it deserves, that facilities are totally inadequate and that the season for practice has been much too short and confined. Athletics should be on the same footing as games, dancing and swimming, and some athletic training should be included in the scheme for the whole period of the year, though obviously the spring and summer are the times when most stress could profitably be laid upon it.

Some progress has been made by extending training facilities, in marking running tracks, digging jumping pits and provision of jumping and hurdling apparatus in the Parks.

The Salford Schools Athletic Association held meetings in June, 1945, at the Lower Broughton Playing Field. A much extended programme necessitated meetings on two afternoons to complete the events. The Saturday morning games arranged by the Salford School Athletic Association throughout the year cover Association and Rugby football, cricket, netball, rounders and athletics. During the past year these games have been arranged on a bigger scale and many more schools joined in the activities.

SWIMMING. This beneficial and useful activity should be made available for every child at some stage of his/her school life. To achieve this, the two

essential factors are sufficient swimming baths and efficient instructors. Both have been very difficult problems during the last twelve months. Of the four Salford Baths, only two were available for the summer season, and then for afternoons only. During the winter one bath on the Seedley side of the City was available for three afternoons per week for boys and two afternoons for girls. Schools in the Higher Broughton area were again able to use Cheetham Hill Baths throughout the year, being allowed one morning a week each for boys and girls.

During the summer months 36 classes of 30 boys were arranged each week and 29 classes of 30 girls, plus 16 classes of 20 girls each fortnight. During the winter months 16 classes of 30 boys and 12 classes of 30 girls were arranged each week.

During 1944-45 the number of boys' attendances at the swimming baths was 16,348 and girls 8,666. Both boys' and girls' attendances show a decrease on the previous year. In the case of the girls the drop is almost 50 per cent., this being due to the fact, that the number of possible visits to the baths had to be halved owing to lack of swimming staff. It is interesting to note that this lack of instruction shows itself again in the number of 3rd Class Certificates and Free Season Tickets awarded to the girls, whilst the 1st and 2nd Class Certificates show very little change.

Several schools had to withdraw children from swimming instruction entirely as there was no member of staff available to conduct the children to and from the baths. It is emphasised that there is always a member of the swimming staff at the bath for instructional purposes, and in the event of his/her absence, the children are not admitted to the plunge. The Education Committee had decided not to allow small groups of senior children to travel to and from the baths under the supervision of a school prefect whilst the present grave shortage of teachers exists, and this further curtailed swimming attendances.

Swimming Certificate Examinations were arranged at the end of September with the following results :—

	1st Class.	2nd Class.	3rd Class.
Girls    ...    ...    ...    ...    ...	102	145	116
Boys    ...    ...    ...    ...    ...	146	215	303

N.B.—1st Class : Swim 50 yards back, 50 yards breast (four lengths).  
2nd Class : Swim 50 yards breast (two lengths).  
3rd Class : Swim 25 yards breast (one length).



Free season tickets to attend baths, to children taught to swim during the current season, were awarded to 261 boys and 84 girls.

As a result of the winter swimming activities, girls from various schools were awarded Certificates as under, by the Royal Life Saving Society.

Elementary.	Intermediate.	Bronze Medallion.	Bar to Bronze Medallion.
32	26	18	2

In the Life Saving Examinations conducted by the Humane Society of the Salford Hundred, the full allocation of medals was again awarded, being four to girls and eight to boys.

Much has been done, but still much remains to be done before the scheme of Physical Education is sufficiently wide to embrace all those aspects of education which influence the physical life of the child or young person, including his mental attitude towards his body and its welfare. The Education Act, 1944, offers hope that much may be done to improve facilities generally for Physical Education, and with this in mind it is hoped to report much greater progress in all branches of Physical Education in the future.

## APPENDIX

### Summary of investigations carried out.

#### Incidence of Inguinal Hernia in Secondary School Boys.

In two Secondary Schools for Boys in Salford, a total of 880 boys were examined. Among these, four cases of untreated inguinal hernia were found. One case was known to the parents but they had taken no action about it until they were persuaded by the Medical Officer. The other three cases were not known to the parents.

In all four cases arrangements were made for operative treatment and until this could be carried out the boys were advised not to take part in strenuous exercise or lifting of heavy weights.

In addition to these four cases of hernia requiring treatment, there were 22 boys who had had operative treatment for inguinal hernia, making in all a total of 26 cases of inguinal hernia—3 per cent. of the 880 boys.

In all the 22 boys who had had the operation, the results were satisfactory.

The ages of the boys ranged from 10 to 18 years.

The deductions to be made from these observations are :—

1. Inguinal hernia is a comparatively common condition in boys. Three per cent. out of a total of 880 boys.
2. It is possible for it to be present in boys in their teens without either boys or parents suspecting its presence.
3. The results of operative treatment are extremely satisfactory.

#### Noise in Schools.

*“ When you can measure what you are talking about, and express it in numbers, you know something about it ; but, when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind ; it may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the stage of science.”*—Lord Kelvin.

It is usual in school hygiene to find that many problems are solved by modernisation, but in respect of noise, when old schools give place to new buildings, this may not always be so. On the one hand many old buildings are situated in busy streets where there is noisy traffic, but sometimes in new schools scant attention has been paid to problems of noise abatement. The siting of gymnasia is a case in point.

The use of some modern building materials seems to have a bad effect and incidental noises are reverberated. Modern education demands freedom of movement of chairs, tables, etc., whilst schemes such as school milk may involve the noisy distribution of milk crates. Open windows and cross ventilation, so desirable from a health view-point, inevitably entail external noise.

Far too often is it assumed that a child hears what the teacher says. By missing important teaching, the child fails to understand, and unless he has compensatory intelligence may fall behind in the educational stream. All that the teacher says must be of intensity louder than the background noise. It is of interest to recall the numerical values of common noises :—

#### PHONS OR DECIBELS (db).

- 130 Near threshold of feeling or pain.
- 115-125 Proximity of aeroplane engine.
- 105-115 Proximity of riveting.
- 95-105 Proximity of loud motor horn.
- 90 Noisy lorry (30 m.p.h.) at 20 feet.
- 80 Quiet car (30 m.p.h.) at 20 feet.
- 70-80 In busy main street.
- 70 Loud conversation.
- 60 Quiet conversation.
- 50 In suburban train, window open.
- 40 In quiet residential street.
- 30 Ticking of watch at 3 feet.
- 20 In very quiet room.
- 10 In extremely quiet room.
- 0 Near threshold of hearing.

Only those who have attempted to conduct accurate group hearing tests in school children know how noisy even "quiet" schools can be. Additional support is given to a progressive policy of siting schools away from busy streets, and on sites sufficiently large to protect them by large playground areas from distracting street noise.

Measurements of noise by a portable Subjective Noise Meter (Metropolitan-Vickers Electrical Company Limited) were taken in seven schools—St. Philip's, Primrose Hill, Stowell Memorial in Trafford Road School, Broughton Modern, Salford Grammar, St. John's, Broughton and Lancaster Road.

In St. Philip's School the measurements were taken in the hall of the Infants' Department, on the ground floor, with the Upper Department at play in the yard. Windows were open and the noise from passing trams was frequently audible. The children were playing with hard toys, trains, bricks, etc., and under these conditions the recorded noise measurement was 80 db. This decreased to 70 db. when the older pupils went back into school at the end of playtime.

In the same room with a quiet lesson in progress and the windows closed on the noise of boys playing football outside, the measurement was 50 db.

On the first floor of Primrose Hill School, Girls' Department, measurements were done in a classroom adjoining the hall. Windows on two walls were open, one side overlooking the empty playground. Noise measurement whilst the scholars were having silent reading showed 45 db. The presence of a class of girls having gym in the yard altered the background noise to 65 db.

The measurements in Trafford Road School were made in a part of the building taken over by Stowell Memorial, on the ground floor. The classroom, one-half of the partitionally divided hall, had a wooden floor and windows on two sides, overlooking Trafford Road at the front and the Docks to the rear. Very heavy traffic frequently passes along the road, and there are loud intermittent noises from the Docks. The boys were reading aloud individually, and the classroom on the other side of the partition was also occupied. With open windows the background noise was estimated at 75 db., and the closing of the windows made no marked difference.

At Broughton Modern School, the noise measurement taken in the medical room which is centrally situated on the ground floor, was 45 db. One side of the room overlooks a garden plot, and staff rooms and the staff corridor are on the other sides. The room has a wooden floor and half-tiled walls. The needlework room showed a sound measurement of 50 db. which increased to 65 db. when the gramophone was being played in the next door music room.



At Salford Grammar School, in the empty hall with closed windows, wooden floor and doors opening on to the corridor, 45 db. were recorded. This changed to 55 db. with the noise of a passing train. On the ground floor, in a classroom opposite Leaf Square, with trams and trains occasionally heard, and with the windows open, the measurement was 50 db.

During this ascertainment the boys in class were reading aloud individually.

At St. John's School, Broughton, the recordings were made in the hall which is sectionally divided by screens and accommodates four classes. Windows on three sides were open. Various lessons were being taught and some children were walking about. The Head Master mentioned that the room was noisier than usual at the time the measurement of 65 db. was taken.

Fifty-five db. were recorded at Lancaster Road School in the corridor which runs the length of the building. The empty hall was opposite and several occupied classrooms to the rear. With the additional noise of children moving about the corridor—changing rooms, etc.—the measurement was 75 db.

### Scabies.

RAPID SURVEY. Examination of over 20,000 children took place, and the incidence was estimated to be 0·6 per cent., compared with 0·8 per cent. in 1944. This, however, is an underestimate. Some cases will have been missed because of the inadequately lit rooms in which the examinations were done, and cases without burrows on the hands will not have been recorded. Inspection of factory workers was undertaken, not only to discover the incidence, but also as a novel means of ascertaining possibly-infected children who were contacts of those workers suffering from scabies, a home visit being paid in each of these cases.

### IMPLICATIONS.

The incidence revealed by these rapid surveys seems high, especially in view of the fact that much time and attention had been devoted to the diagnosis and treatment of scabies, and that the scabies treatment service had the advantage of having for over two years before the 1944 survey a whole-time trained worker, besides the usual attention given by medical and nursing staff of the Public Health and School Health Services. A 24-hour service of treatment had been provided during the war to treat workers and others at any time of the day or night. Notification by Practitioners had been officially in operation for just over two months before the first survey commenced, and has continued.

A domiciliary treatment service is also provided, for contacts who owing to illness, advanced pregnancy, or other reason cannot come to the treatment centre. Such patients may be treated at home by the staff of the centre.

The survey served a useful purpose in bringing for treatment hitherto unsuspected cases ; and, as the " family follow-up " was carried out in every case, some infected adults and adolescents, who otherwise would have been missed, were enabled to have treatment.

These surveys have shown us that even after intensive anti-scabies measures, the problem of scabies is not solved. It is curious that in scabies we have a simple and certain method of diagnosis, (the extraction of a mite), and a simple and certain method of cure, (thorough application of Benzyl Benzoate Emulsion). These are, in their way, as near perfect as can be in this world, and yet we are still discovering new cases, and we have not completely conquered the disease. Our experience shows that this disease stubbornly resists eradication, and shows how difficult the fight is.

Truly a comprehensive campaign must be carried out for some years. A campaign which must include the family, the social and the economic background in which this disease spreads.

#### **Vitamin Scheme.**

Over 1,000 children between the ages of 5 and 14 were divided at random into two groups, one of which received one vitamin capsule daily (containing vitamin A, 4,000 i.u. ; vitamin B<sub>1</sub>, 1 mg. ; riboflavin, 2 mg. ; nicotinamide, 20 mg. ; ascorbic acid, 50 mg. ; vitamin D, 600 i.u.), and the other a placebo (control) capsule daily.

Before the commencement of administration of the capsules, and at the end of the experiment which lasted approximately twelve months, the children were medically examined and full data recorded on special forms. Such facts as the home and economic conditions of the family, and whether the child had school milk and meals, were noted. Dietary data to ascertain the level of vitamin intakes from ordinary diets, were collected from a number of families, and were found, in the main, to be adequate. The calcium intake, however, was lower than the League of Nations standard.

The average daily vitamin intakes were :—

Vitamin A, 3,000-4,000 i.u.  
Vitamin B<sub>1</sub>, 1-1½ mg.  
Ascorbic acid, 35-45 mg.

The ascorbic acid intake which would otherwise have averaged 20-25 mg. per head, was raised by a chance distribution of oranges. Analysis of Salford school meals showed that they provided 2-19 mg. of ascorbic acid per day, the amount depending on whether or not the meal was cooked on the school premises. Ten mg. or less must have been the daily intake of the children at some schools yet, over a long period, no clinical symptoms were apparent.

During the experiment all absences from school were noted and classified into various categories. No consistency of effect was noted however. The vitamin supplement had no consistent effect on growth, strength, endurance, fatigue potential, incidence or severity of clinical conditions, hearing, and absenteeism from school.

A parallel investigation to determine the effect on gingivitis of an ascorbic acid supplement was carried out. Fifty mg. were given daily to a group of 500 children. A similar group of children acted as "control" receiving no supplement or placebo. Comparisons made between these groups suggest that the ascorbic acid supplement had no beneficial effect on gingivitis.

An interesting result after the end of the test was requests from a few parents for the continuance of administration of the capsules to the children, in view of the benefit which the children had derived. Investigation showed, however, that there were more requests for continuance from parents of children who were in the control group, than in the vitamin group. This is an illustration of the difficulty of estimating benefits conferred on children by the administration of any dietary supplement—unless there is a rigorous control, statistically, of the whole investigation.

So many chance factors operate. For example, children who were debilitated at the commencement of the test, and who would have recovered in any case, from the infections from which they had suffered—this, and many other factors operate and prevent true conclusions being drawn.

The fact that the experiment had a negative result in that no benefit was apparently given by administering the capsules does not alter the great importance of investigations with negative results. Such investigations may upset preconceived notions, but are, nevertheless, useful in the pursuit of facts.



## STATISTICAL TABLES.

### MAINTAINED PRIMARY AND SECONDARY SCHOOLS.

TABLE 1.

RETURN OF MEDICAL INSPECTIONS DURING THE YEAR ENDED  
31ST DECEMBER, 1945.

#### A.—ROUTINE MEDICAL INSPECTIONS.

(1) No. of Inspections :—

Entrants*... ..	4,430
Second Age Group ... ..	194
Third Age Group ... ..	2,174
TOTAL ... ..	6,798

\*Entrants include Nursery Classes.

(2) No. of other Routine Inspections :—

#### B. OTHER INSPECTIONS.

No. of Special Inspections and Re-inspections... ..	10,933
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TABLE II.

CLASSIFICATION OF THE NUTRITION OF PUPILS INSPECTED DURING THE YEAR  
IN THE ROUTINE AGE GROUPS.

Of 6,345 pupils inspected, 25·7 per cent. were classified A (excellent), 62·8 per cent. B (normal), 11·3 per cent. C (slightly subnormal) and 0·2 per cent. D (bad). This latter group consisted of only 12 pupils.

The remaining 453 pupils were inspected in Secondary Schools before 31st March, 1945, and are not included in the percentages.

RETURN OF DEFECTS TREATED DURING THE YEAR ENDED  
31ST DECEMBER, 1945.

**TABLE III.**

TREATMENT TABLES.

GROUP I.—MINOR AILMENTS (EXCLUDING UNCLEANLINESS, FOR WHICH SEE  
TABLE V).

Number of Defects treated or under treatment during the year ... .. 2,915

GROUP II.—DEFECTIVE VISION AND SQUINT (EXCLUDING MINOR EYE DEFECTS  
TREATED AS MINOR AILMENTS, GROUP I).

Defect or Disease.

Errors of Refraction (including Squint) ... .. 2,770

Other Defects or Diseases of the Eyes (excluding those recorded  
in Group I) ... .. 706

TOTAL ... .. 3,476

Total number of children for whom spectacles were prescribed :—

Under the Authority's Scheme ... .. 1,304

Total number of children who obtained spectacles :—

Under the Authority's Scheme ... .. 1,277

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Received Operative Treatment under the Authority's Scheme in Clinic or Hospital.	Received other Forms of Treatment.	Total number treated.
529	202	731

TABLE IV.

## DENTAL INSPECTION AND TREATMENT.

(1)	Number of pupils inspected by the Dentist :		
	(a) Routine age-groups ... ..	19,151	
	(b) Specials ... ..	1,042	
	TOTAL ... ..	20,193	
(2)	Number found to require treatment...	11,305	
(3)	Number actually treated ... ..	7,255	
(4)	Attendances made by pupils for treatment ... ..	10,438	
(5)	Half-days devoted to :—		
	Inspection ... ..	164	
	Treatment ... ..	1,465	
		1,629	
(6)	Fillings :—		
	(a) Permanent teeth ... ..	5,315	
	(b) Temporary teeth ... ..	422	
		5,737	
(7)	Extractions :—		
	(a) Permanent teeth ... ..	2,276	
	(b) Temporary teeth ... ..	7,469	
		9,745	
(8)	Administrations of general anæsthetics for extractions...	3,313	
(9)	Other operations :—		
	(a) Permanent teeth ... ..	2,242	
	(b) Temporary teeth ... ..	633	
		2,875	

TABLE V.

## VERMINOUS CONDITIONS.

(i)	Average number of visits made during the year by the School Nurses or other authorised persons ... ..	10
(ii)	Total number of examinations of pupils in the Schools by School Nurses or other authorised persons ... ..	55,027
(iii)	Number of individual pupils found unclean ... ..	1,429



## TABLE VI.

## BLIND AND DEAF PUPILS.

One blind pupil, who is not at present attending a school or institution, is awaiting admission to the Preston School for the Partially Sighted.

Five deaf pupils are all on the waiting list of the Royal Residential Schools for the Deaf. Two are attending ordinary schools.

## STAFF

The following are the Officers in the School Health Service, and the proportion of time which they devote to the Service is shown in brackets :—

SCHOOL MEDICAL OFFICER, John Lancelot Burn ( $\frac{1}{4}$ ).

## ASSISTANT SCHOOL MEDICAL OFFICERS—

Harold Heathcote (1) ; John Laurence Bradley, in H.M. Forces ; Harold Bernard Kilroe, in H.M. Forces ; Stanley Robertson Warren, temporary (8/11) ; Mrs. Anne Rothwell Gratton, temporary (9/11) ; John Scully, in H.M. Forces ; Miss Margaret Sproul (2/11) ; Miss Marian Maxwell Reekie (2/11) ; Miss Kathleen Mary Boyes (2/11).

## DENTAL OFFICERS—

Laurence Hilton Pollitt (10/11) ; Miss Mary Gifford Macleod (1) ; Joseph Arthur Pilling, in H.M. Forces ; John Reginald Clayton (1) ; Miss Agnes Marianne Paterson, temporary (1).

SCHOOL NURSING STAFF. There are employed 18 School Nurses, 12 of whom are whole-time and 6 half-time, 3 whole-time Nursing Assistants, and 4 whole-time Dental Attendants.